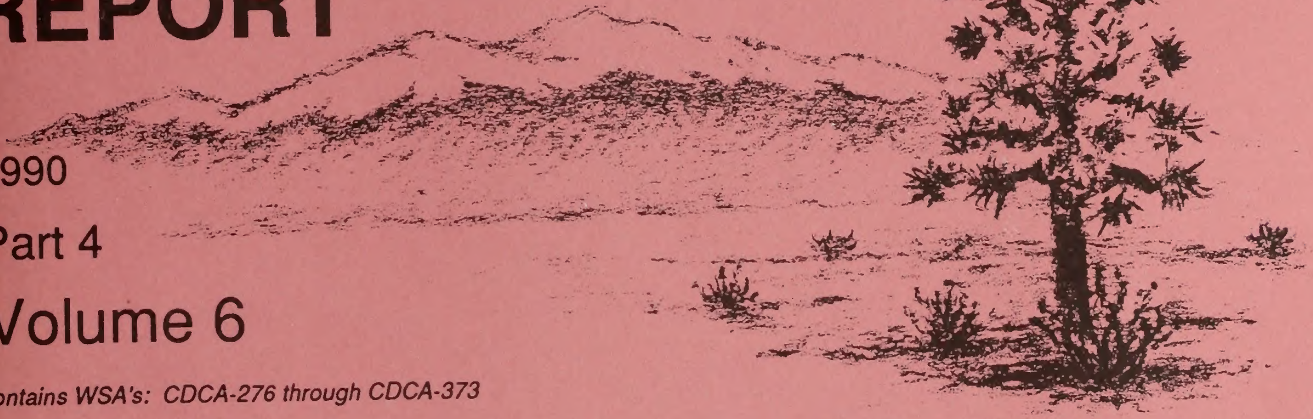
BLM LIBRARY
88045709

Bureau of Land Management

CALIFORNIA STATEWIDE WILDERNESS STUDY REPORT



1990

Part 4

Volume 6

Contains WSA's: CDCA-276 through CDCA-373

Dead Mountains
CDCA-276

Piute Mountains
CDCA-288

Essex
CDCA-288A

Bigelow Cholla Garden
CDCA-290

Sacramento Mountains
CDCA-292

Stepladder Mountains
CDCA-294

Pilot Peak
CDCA-295

Old Woman Mountains
CDCA-299

Ship Mountains
CDCA-300

Cleghorn Lakes
CDCA-304

Amboy Crater
CDCA-304A

Sheephole/Cadiz
CDCA-305

Turtle Mountains
CDCA-307

Chemehuevi Mountains
CDCA-310

Whipple Mountains
CDCA-312

Big Maria Mountains
CDCA-321

Rice Valley
CDCA-322

Palen/McCoy
CDCA-325

Coxcomb Mountains
CDCA-328

Eagle Mountains
CDCA-334

Pinto Basin
CDCA-334A

Pinto Mountains
CDCA-335

Santa Rosa Mountains
CDCA-341

Mecca Hills
CDCA-343

Orocopia Mountains
CDCA-344

Chuckwalla Mountains
CDCA-348

Little Chuckwalla Mountains
CDCA-350

Palo Verde Mountains
CDCA-352

Indian Pass
CDCA-355

Picacho Peak
CDCA-355A

Little Picacho Peak
CDCA-356

North Algodones Dunes
CDCA-360

South Algodones Dunes
CDCA-362

Jacumba
CDCA-368

Fish Creek Mountains
CDCA-372

Coyote Mountains
CDCA-373

BLM MISSION STATEMENT

The Bureau of Land Management is responsible for the balanced management of Public Lands and resources and their various values so that they are considered in the combination of uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources. These resources include recreation, range, timber, minerals, watershed, fish and wildlife, wilderness and natural, scenic, scientific and cultural values.

BLM LIBRARY
RS 150A BLDG. 50
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, CO 80225

BLM-CA-PT-90-006-8520

ID88045709

QH
76.5
.C2
C35
1991
V.6

Supplemental information to these reports includes Environmental Documents, Mineral Survey Reports, and maps. To review these supplemental data, or to obtain additional information, please contact:

Bureau of Land Management
Branch of Wilderness Resources
Room 3360
Main Interior Building
18th and C Streets
Washington, D.C. 20002

(202) 208-6064

or

Bureau of Land Management
Branch of Lands and Recreation
Federal Building
2800 Cottage Way
Sacramento, CA 95825

(916) 978-4730

BLM LIBRARY
RS 150A BLDG. 50
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, CO 80225

Printed on Recycled Paper

Dead Mountains

CDCA 276

DEAD MOUNTAINS WILDERNESS STUDY AREA (WSA)

(CDCA-276)

1. THE STUDY AREA --- 47,971 acres

The Dead Mountains WSA is located in eastern San Bernardino County, on the eastern edge of the California Desert Conservation Area (CDCA). The nearest cities are Needles, California, 12 miles southeast; and Laughlin, Nevada, 15 miles northeast. The WSA contains 34,727 acres of public land under the jurisdiction of the Bureau of Land Management (BLM), 2,887 acres of State land, and private inholdings totalling 10,357 acres (see Map 1 and Table 1).

On the northwest, the WSA boundary is a utility corridor identified in the 1980 Western Regional Corridor Study. The corridor contains a Southern California Edison powerline, one and three-quarter miles of which is inside the WSA. The WSA boundary follows the California/Nevada state line on the northeast, a series of section lines roughly paralleling the administrative boundary of the California Desert Conservation Area on the east forming a cherrystem around a gravel pit and road, a combination of a Southern California Gas Company pipeline, Interstate 40, Santa Fe Railroad main line, and private land on the south, and a combination of Piute Wash, private land and a Santa Fe Railroad maintenance road on the west.

The study area is dominated by the mountain range for which it is named. The spine of the Dead Mountains runs from north to south through the WSA, a jagged, steep, rust-colored range, crowned by Mount Manchester at 3,598 feet. The mountains give way to sweeping bajadas that gradually slope toward the Piute Valley on the west, and the Colorado River on the east.

The 21,853-acre Dead Mountains Area of Critical Environmental Concern (ACEC) is within the WSA, established to recognize and protect the area's significant Native American values.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EISs) for the CDCA Plan: protection, use, balanced, and no action; a summary of the area's wilderness values was included in Appendix III of the Final EIS. Three different suitability recommendations were analyzed in the EISs: no wilderness and two partial wilderness recommendations including 97% and 60% of the WSA as suitable.

2. RECOMMENDATION AND RATIONALE ---

0	acres recommended for wilderness
34,727	BLM acres recommended or nonwilderness

No wilderness is the recommendation for the Dead Mountains WSA. The entire acreage in this WSA is released for uses other than wilderness. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The no-wilderness recommendation is based on the following rationale: (1) the landforms and ecosystem of the Dead Mountains are already well represented in other areas recommended for wilderness designation; (2) the special features of this WSA can be protected through ACEC management; (3) deposits of saleable minerals such as sand, gravel, and rip-rap rock that are abundant within the WSA, are strategically located for several uses, and could not be extracted in the event of wilderness designation; and (4) wilderness designation would potentially conflict with development of future energy and communications transmission facilities.

The Dead Mountains WSA is typical of the topography and vegetation displayed in the surrounding mountains and valleys. Nearby WSAs recommended for wilderness designation display the same physical and biological resources found within this WSA. There are 14 BLM study areas recommended for wilderness designation within 50 miles of the Dead Mountains WSA. These 14 areas possess very high quality wilderness values, and provide a good representative sample of the Mojave and Great Basin Deserts in their wild state. There are approximately 30 miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use.

Other than its importance from a cultural resource and Native American perspective, the WSA offers no unique features. An area of 21,853 acres encompassing the important archeological sites and the areas of special significance to the Mohave and Chemehuevi tribes was designated an ACEC in 1980. The ACEC Plan guides management efforts, assuring that proper protection measures will be stipulated as part of any consumptive resource uses that may be authorized. The ACEC Plan assures the future integrity of these important sites without wilderness designation.

Because of the Dead Mountains proximity to the Colorado River, portions of the range have been used as a source of rip-rap for flood control projects. Currently the Bureau of Reclamation operates a five-acre quarry site in an area that has been cherrystemmed out of the east side of the WSA. The Bureau of Reclamation has expressed an interest in additional sites on the east face of the Dead Mountains. The WSA is also adjacent to the mainline of the Santa Fe Railroad. The railroad has expressed a need to utilize both the mountains and adjacent bajadas within the WSA as sources of rock for flood control developments, as well as a need for vehicular access in portions of the WSA for access for flood control and derailment work.

The north boundary of the WSA is within an energy and utility transmission corridor designated in the 1980 Western Regional Corridor Study. This corridor presently contains an electrical powerline, a portion of which is actually inside the WSA. Wilderness designation could constrain the placement of future facilities within the corridor.

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	34,727
Split Estate	(BLM surface only)	0
Inholdings		
State		2,887
Private		10,357
Total		47,971

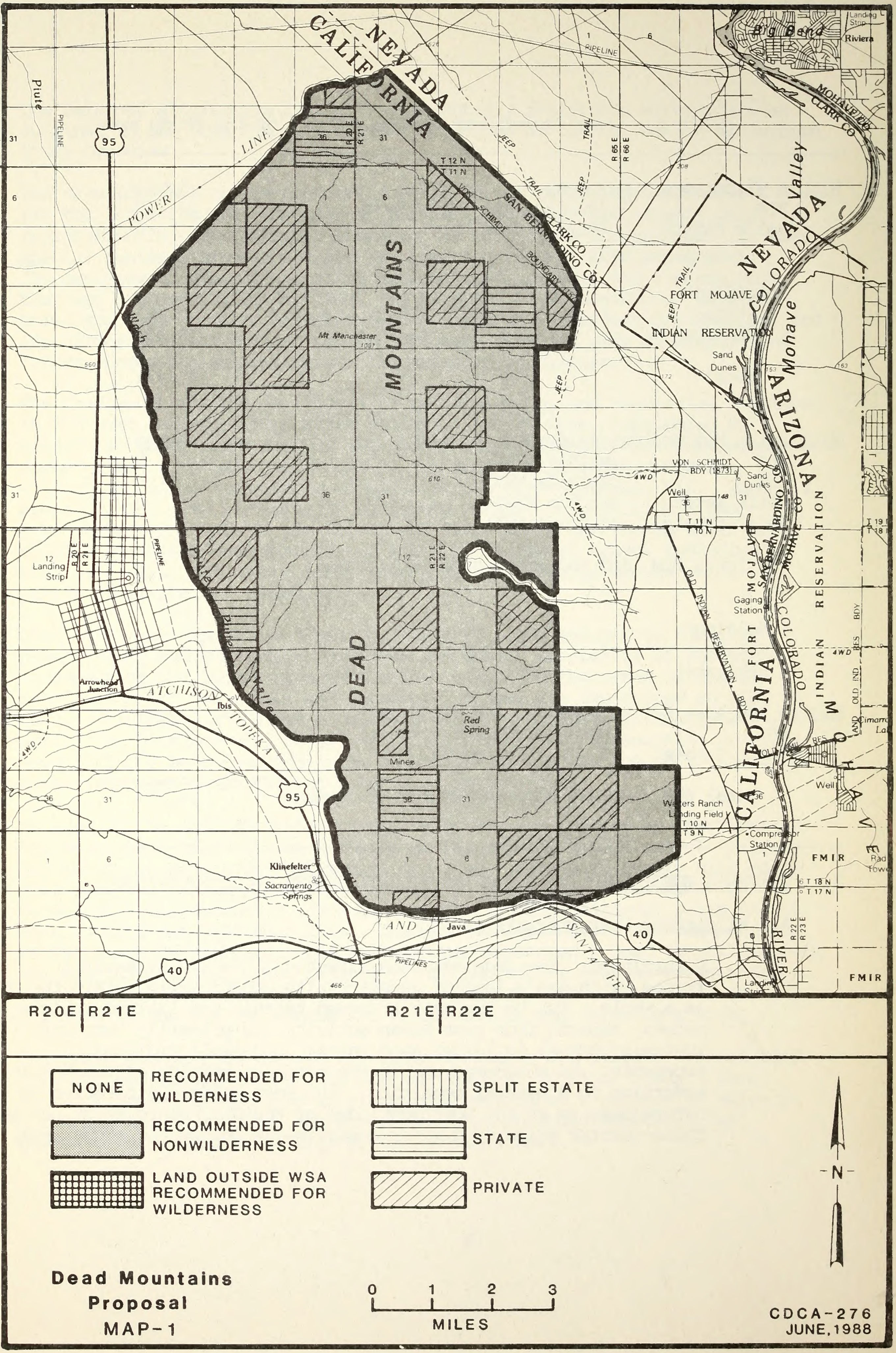
Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	0
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		0
Inholdings		
State		0
Private		0

Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	34,727
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		34,727

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The area has been affected primarily by natural forces, with man's imprint substantially unnoticeable within the WSA as a whole. Due to the area's rugged terrain and limited vehicle access, impacts from past human activity are primarily temporary routes of travel in larger sand washes, and small isolated prospects. An abandoned way in the northern portion of the WSA is reverting to a natural condition. The most evident alteration to naturalness is at the northwest edge of the WSA, where about one and three-quarter miles of a major powerline is inside the study area.


NEVADA
CALIFORNIA
ARIZONA
DEAD
MOUNTAINS
Mt Manchester
Red Spring
Mines
FORT MOJAVE INDIAN RESERVATION
Colorado
Mohave Valley
Sand Dunes
Big Bend
Riviera
Landing Strip
Arrowhead Junction
Ibis
ATCHISON TOPEKA AND SANTA FE
Klinefelter
Sacramento Springs
Java
Waters Ranch Landing Field
Compressor Station
Gaging Station
Well
VON SCHMIDT BDY (1873)
SAN BERNARDINO CO
CLARK CO
MOHAVE CO
Piute Valley
POWER LINE
PIPELINE
PIPELINES
JEEP TRAIL
4WD
OLD INDIAN RESERVATION BDY
FMIR
95
40
T12N
T11N
T10N
T9N
R20E
R21E
R22E
NONE
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES

Dead Mountains Proposal
MAP-1

CDCA-276
JUNE, 1988

2. Solitude: The range's large winding canyons and rugged terrain create an environment where solitude can usually be achieved without disruption.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: Primitive forms of recreation can be enjoyed within most of the WSA. Opportunities are enhanced by the area's rugged terrain, winding canyons, size, diversity of geological landforms throughout, and lack of any noticeable man-made intrusions.

4. Special Features: Two unusual plant assemblages (UPA) occur within the WSA. The first, the Piute Wash Smoketree Assemblage, is the northernmost occurrence of smoketree (Psorothamnus spinosus) in the California Desert Conservation Area. The second UPA occurs at seeps and springs including Picture Canyon and Red Spring. No BLM sensitive plants and no Federal- or State-listed rare, threatened, or endangered plants are known to occur within the Dead Mountains WSA.

   The mountain range affords suitable foraging and nesting habitat for some of the more common raptors, such as red-tailed hawks, prairie falcons, and probably golden eagles. Desert tortoise inhabit the flats and bajadas in densities of 20 to 50 individuals per square mile, and up to 100 per square mile in some areas. The Dead Mountains formerly were thought to support only transient bighorn sheep range; however, more recent evidence indicates that bighorn inhabit this range on a permanent basis. It is currently thought that as many as 30 bighorn sheep inhabit the Dead Mountains. Both the Desert Tortoise and Desert Bighorn Sheep are on BLM's sensitive species list in California. In addition, the Desert Tortoise is under status review by the U.S. Fish & Wildlife Service for possible Federal listing as a threatened or endangered species.

   The eastern portion of the study area has been determined to be highly sensitive for cultural resources. With only 640 acres of the study area surveyed, the existing record of cultural resources is scant. There are seven recorded archaeological sites which are thought to represent a small fraction of what is actually present. There are three petroglyph sites, including Picture Canyon, which with 300 to 500 elements, is one of the major petroglyph locations in the eastern Mojave Desert. This site is also a potential candidate for listing on the National Register of Historic Places. There are two rock shelter sites; one is associated with scattered pottery sherds, the other with bedrock mortars, projectile points, debris from stone tool manufacturing, and portable milling tools.

Other known cultural resources include an aboriginal trails system on the east and west sides of the Dead Mountains.

The Dead Mountains represent an area of particular religious and cultural significance to several Native American groups. The area is significant in the origin myth of the Mohave and other oral narratives of both the Mohave and the Chemehuevi. The region is known to the Mohave as "Natmanhe-Ahathayueh," and includes an additional, more specific location of importance; "Eehoo-Kusia." The Dead Mountain range is known as "Avi-Mat'ta." Traditional heritage values and cultural concerns in the area pertain to areas of traditional collection of both floral and faunal articles, ceremonial sites, occupation sites, as well as the pervasive religious sensitivity of the range associated with Mohave myth. One of the major springs in the study area is mentioned in Mohave myth and may be the spring which is said to have spiritual and healing power. In addition to the spring, there are numerous areas in the Dead Mountains which have sacred or ritual association for the Mohave. Known hawk and eagle feather gathering areas utilized by the Mohave are located in the eastern half of the WSA. The southeast portion of the study area may have been the site of a battle between the Mohave and the Southern Piute, and a war between Mohave and Apache. An area in the northern portion of the WSA was apparently used in the late prehistoric and early historic periods for cremations.

B. Diversity in the National Wilderness Preservation System (NWPS)

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 34,727 acres of the American Desert/Creosote bush ecosystem. The Dead Mountains would not increase the diversity of the types of ecosystems represented in the NWPS. This province is widespread throughout the California Desert and is contained within other WSAs in the CDCA that are recommended for wilderness designation.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas areas	NWPS Areas acres	Other BLM Studies areas	Other BLM Studies acres
	NATIONWIDE			
American Desert/Creosote Bush	1	343,753	117	4,233,182
	CALIFORNIA			
American Desert/Creosote Bush	1	343,753	88	3,619,378

2. Expanding the opportunities for solitude or primitive recreation within a days driving time (five hours) of major population centers: The WSA is within a five-hour drive of six major population centers. Table 3 summarizes the number and acreage of wilderness areas and other BLM study areas within a five-hour drive of these population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas		Other BLM Studies	
	areas	acres	areas	acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Bakersfield	32	4,071,358	128	3,998,548
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Riverside-San Bernardino	22	2,031,054	205	7,658,649
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The nearest designated wilderness is Joshua Tree Wilderness in Joshua Tree National Monument, managed by the National Park Service, approximately 75 air miles southwest. Within 50 air miles are 14 BLM study areas recommended for wilderness designation: six in Arizona's Phoenix District, one in Nevada's Las Vegas District, and seven in the California Desert District.

C. Manageability

The Dead Mountains WSA is manageable as wilderness. However, several factors complicate manageability.

Preservation of wilderness values could not be assured without acquisition of inholdings, which constitute approximately one-quarter of the total land area of this WSA.

Designating the study area as wilderness has potential to conflict with development of future communications and energy transmission facilities. The northwest boundary is within a four to six mile wide utility corridor identified in the 1980 Western Regional Corridor Study. This corridor has not reached its development capacity although many of the 16 utility corridors identified in the CDCA Plan are nearing capacity. Wilderness designation of the Dead Mountains WSA could prohibit full development of the corridor, forcing installation of new energy transmission lines in other areas not previously disturbed. Depending upon which WSAs are ultimately designated wilderness within the CDCA, there may be constraints placed upon the long-term energy and communication transmission capabilities in the southwestern United States.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Dead Mountains WSA is in the Homer Mountain Geology-Energy-Minerals (G-E-M) Resource Area (GRA). GRA data in 1980 indicated a moderate to high potential for the occurrence of copper and manganese in the south-central area of the WSA. During World War I there were a few hundred ounces of manganese produced from the Black Mountain mine. The mine was also prospected for high-grade copper during the 1860s; however, there are no reported production figures for this mine. Based on aerial geophysical surveys, uranium and uranium/thorium ratio anomalies were identified in the northern part of the Dead Mountain range. Near the east-central part of the WSA large amounts of rip-rap were quarried for constructing levees by the Water and Power Resources Service. This quarry was cherrystemmed out of the WSA along the eastern boundary. There was prospecting for high quality bentonite and montmorillonite clays just south of the quarry, for use as drilling muds for the oil industry and for extraction of aluminum. This same area was also indicated to have potential for zeolites. There were at least 15 unpatented mining claims recorded with BLM in 1980 in the south-central part of the WSA. An area of less than 320 acres in the southeast corner of the WSA was under a BLM mineral material free-use permit in 1980 to the State of California.

   On the basis of the 1978 U.S. Geological Survey (USGS) classification of this area as prospectively valuable for oil and gas, BLM considered the western third and southeast part of the WSA as having a moderate potential for the occurrence of oil and gas. Piute Wash was considered to have a high potential for the occurrence of sand and gravel, as indicated on Map 2.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Decision: No USGS and U.S. Bureau of Mines (BOM) mineral survey has been conducted for this WSA because it is recommended nonsuitable for wilderness designation.

   As of December 1987, the California Division of Mines and Geology (CDMG) completed mineral surveys of the Needles 1x2 degree quadrangle, San Bernardino County, California in Open File Report

(OFR) 85-18 SAC and of Lanfair Valley, Homer Mountain, and Davis Dam 15 minute quadrangles in OFR 84-30 SAC. The CDMG mineral land classifications covered the entire area of the Dead Mountains WSA and more clearly define the mineral occurrence potential for the WSA. The CDMG reports outline an area in the southeastern part of the WSA as having a moderate occurrence potential for copper, gold, silver and barite. This area is indicated on Map 2 and is a reduction from the high occurrence potential ascribed in the 1980 BLM GRA files for the same minerals. The manganese potential described by BLM in 1980 is not considered in the mineral discussion by the CDMG.

A small area along the northwest boundary of the WSA was considered by the CDMG to have a moderate potential for gold, silver and copper. The CDMG also classified the montmorillonitic clays identified by BLM in the east-central part of the WSA, giving it a high potential for occurrence under the BLM classification system. As of December 1987, the clays had not been produced, but Southern Pacific is reported to have conducted an economic suitability study on the clays in 1964 and concluded that the economics were favorable at that time.

No exploration interest has been expressed for oil and gas in this WSA since about 1981. Therefore, the areas considered in the 1980 BLM GRA report as having a moderate potential rating for the occurrence of oil and gas, have been lowered to a low potential.

As of December 1987, no mining or exploration plans had been filed with BLM in this WSA. Unpatented lode mining claims are concentrated in the south and east-central portion of the WSA. The following table summarizes unpatented mining claims recorded with BLM as of December 1987.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	N/A	5	5	N/A	100	100
Placer	N/A	0	0	N/A	0	0
Mill Site	N/A	0	0	N/A	0	0
Total	N/A	5	5	N/A	100	100

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Wilderness values will decline over the long term as exploration and development occurs in areas of moderate to high mineral potential, as portions of the WSA are quarried for common variety mineral materials, and in areas used for OHV recreation. Wilderness values will be retained in the portions of the WSA not subjected to these uses.

2. Impact on Locatable Mineral Exploration and Development: The proposed action will have no impact. Further exploration and development can proceed subject to a plan of operation and other guidelines described in the CDCA Plan.

3. Impact on Bureau of Reclamation Colorado River Project: The BLM will consider requests by the Bureau of Reclamation to remove riprap from portions of the WSA, an action which was previously precluded by the Interim Management Policy for Lands under Wilderness Review.

4. Impact on Sensitive Wildlife Species: Future planned actions will be subject to environmental analysis to identify any potential impacts to desert tortoise or bighorn sheep, allowing development and implementation of appropriate mitigation measures.

5. Impact on Unusual Plant Assemblages: UPAs will continue to be managed in accordance with the CDCA Plan, requiring special consideration in environmental analyses to avoid or minimize impacts, and development of rehabilitation measures where impacts are unavoidable.

6. Impact on Native American Uses and Values: Native American access to traditional religious sites will be retained. Sacred features will be subject to protection under the American Indian Religious Freedom Act. Any changes in physical appearance or use of sacred sites will be made only with the concurrence of the affected Native American group.

7. Impact on Archeological Resources: All proposed surface-disturbing activities will be subjected to environmental analysis to allow the detection and salvage of any resources. Some sites may be unintentionally damaged by casual OHV recreational activity.

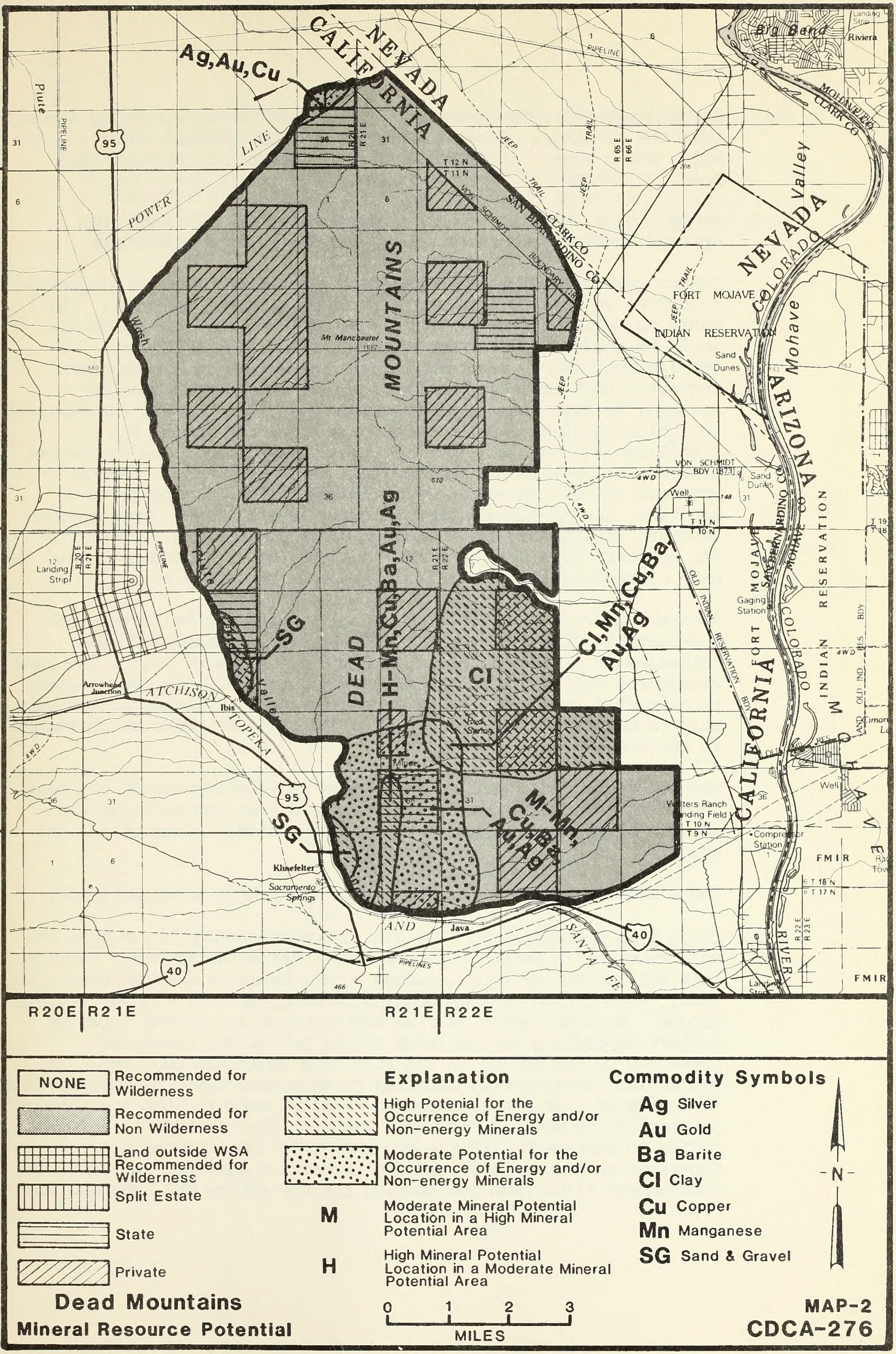
8. Impact on Santa Fe Railroad Maintenance: No impact. Requests for mineral materials and vehicular access to accomplish necessary maintenance and repairs can be considered.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA-Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Known inaccuracies or explanations deemed useful to the reader are noted in parentheses.



NEVADA
CALIFORNIA
Ag,Au,Cu
Piute
PIPELINE
95
POWER LINE
T12N
T11N
T10N
T9N
JEEP TRAIL
VON SCHMIDT
SAN BERNARDINO CO
CLARK CO
BOUNDARY
Big Bend
Riviera
Landing Strip
MOHAVE CO
CLARK CO
Valley
FORT MOJAVE INDIAN RESERVATION
Sand Dunes
COLORADO
Mohave
ARIZONA
MOUNTAINS
Mt Manchester
DEAD
Wash
VON SCHMIDT BDY (1873)
Well
4WD
H-Mn,Cu,Ba,Au,Ag
Cl,Mn,Cu,Ba,Au,Ag
Cl
SG
Red Spring
Landing Strip
Arrowhead Junction
ATCHISON TOPEKA
Ibis
Piute Valley
Miller
M-Mn,Cu,Ba,Au,Ag
Klinefelter
Sacramento Springs
AND SANTA FE
Java
PIPELINES
40
Walters Ranch Landing Field
Compressor Station
Gaging Station
OLD INDIAN RESERVATION BDY
FORT MOJAVE INDIAN RESERVATION
SAN BERNARDINO CO
MOHAVE CO
RIVER
FMIR
R20E R21E
R21E R22E
R22E R23E
R65E R66E
NONE Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
Ag Silver
Au Gold
Ba Barite
Cl Clay
Cu Copper
Mn Manganese
SG Sand & Gravel
N
0 1 2 3
MILES

Dead Mountains

Mineral Resource Potential

MAP-2

CDCA-276

1. Inventory Phase: Those comments pertaining to the inventory agreed with the findings. Several comments mentioned additional roads and ways, and a mine. After field checks, appropriate changes were made.

2. Study Phase: Eleven comments were received on this WSA. Ten opposed further wilderness study, and one favored wilderness.

   Texaco Corporation noted the potential for oil, gas, and geothermal resources in the southern and western portions of the unit. The Santa Fe Railroad Company stated that off-highway vehicle access would be needed for drainage surveys, flash flood surveys, derailments, and to maintain dikes. The Bureau of Reclamation requested that lands on the eastern face of the mountains be deleted, as this area is an important source of rip-rap for managing the Colorado River for flood control, river regulation and stabilization, and water storage and conservation. One respondent claimed that because of the dryness, heat, and lack of vegetation, the area was of interest only to rockhounds and prospectors; in addition, it was claimed that Sections 12 and 13 may contain large deposits of titanium ore. The County of San Bernardino urged that the boundary be pulled away from the area of urban expansion for the City of Needles (Needles is 12 miles from the study area).

   Several features were mentioned which respondents believed were incompatible with wilderness classifications. These included: transmission lines and towers, private ownership of 35% of the land within the WSA, the presence of a rock quarry and its access road, and assorted roads not listed in the inventory. These factors were said to be responsible for a lack of solitude or primeval character in the area.

   The one respondent favoring wilderness designation viewed the Dead Mountains as providing excellent opportunities for solitude and mentioned superior archeological and historical values within the unit.

   There were no comments in response to the Public Input Workbook.

3. Draft Plan Alternatives: Few public comments specific to this WSA were received in response to the Draft Plan Alternatives. However, this WSA was one of those opposed by the National Outdoor Coalition (NOC), a coalition of rockhounding, mining, and off-highway vehicle groups. A large number of club members sent in printed forms or letters supporting the position of the coalition, which was presented to the Bureau in the form of a "multiple use" map. The map was not sufficiently detailed to determine exact boundaries, but it indicated that NOC recommended "limited use" for the mountainous portion of the WSA and "moderate use" for the remainder. This was partly in agreement with the Use and No Action Alternatives. Conservation groups preferred the Protection Alternative, since it recommended wilderness designation for the entire WSA, whereas the

Balanced Alternative would designate only the Dead Mountain portion as wilderness.

4. Proposed Plan: There were few specific comments on this WSA. Neither group made a concerted complaint about the Proposed Plan's recommendation of "limited use" for WSA 267, although some groups held out for wilderness designation for all WSAs.

   No comments were received from local governments.

Piute Mountains

CDCA 288

PIUTE MOUNTAINS WILDERNESS STUDY AREA (WSA)

(CDCA-288)

1. THE STUDY AREA --- 28,522 acres

The Piute Mountains WSA is located in eastern San Bernardino County, near the eastern edge of the California Desert Conservation Area (CDCA). The nearest community is Needles, California, 20 road miles east. The study area contains 20,279 acres of public land under the jurisdiction of the Bureau of Land Management (BLM), 1,374 acres of State land, and private inholdings totalling 6,869 acres (see Map 1 and Table 1).

The WSA is bordered on the north by the National Trails Highway (State Route 66) and Interstate 40. The eastern and southern boundaries are formed by a gas transmission line maintenance road. The western border is a mine access road which separates this WSA from the neighboring Essex WSA (CDCA-288A).

The appearance of the Piute Mountains WSA is typical of WSAs in the surrounding region, consisting of a mountainous central area, the surrounding bajada, and an extensive flat "apron" of unconsolidated alluvium. The Piute Mountains themselves exhibit strong color contrasts and a texture that varies from very angular, jagged volcanics to rounded, smooth hills. The ridges are cut by numerous canyons and washes.

A small area in the southwestern portion of the WSA is withdrawn for public water reserve purposes under Executive Order of July 10, 1919 (Public Water Reserve 22). About 6,400 acres along the WSA's eastern edge have been possibly contaminated by unexploded military ordnance, a remnant of World War II maneuvers.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EISs) for the CDCA Plan: protection, use, balanced, and no action; a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

0 acres recommended for wilderness
20,279 BLM acres recommended for nonwilderness

No wilderness is the recommendation for the Piute Mountains WSA. The entire acreage in this WSA is released for uses other than wilderness. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

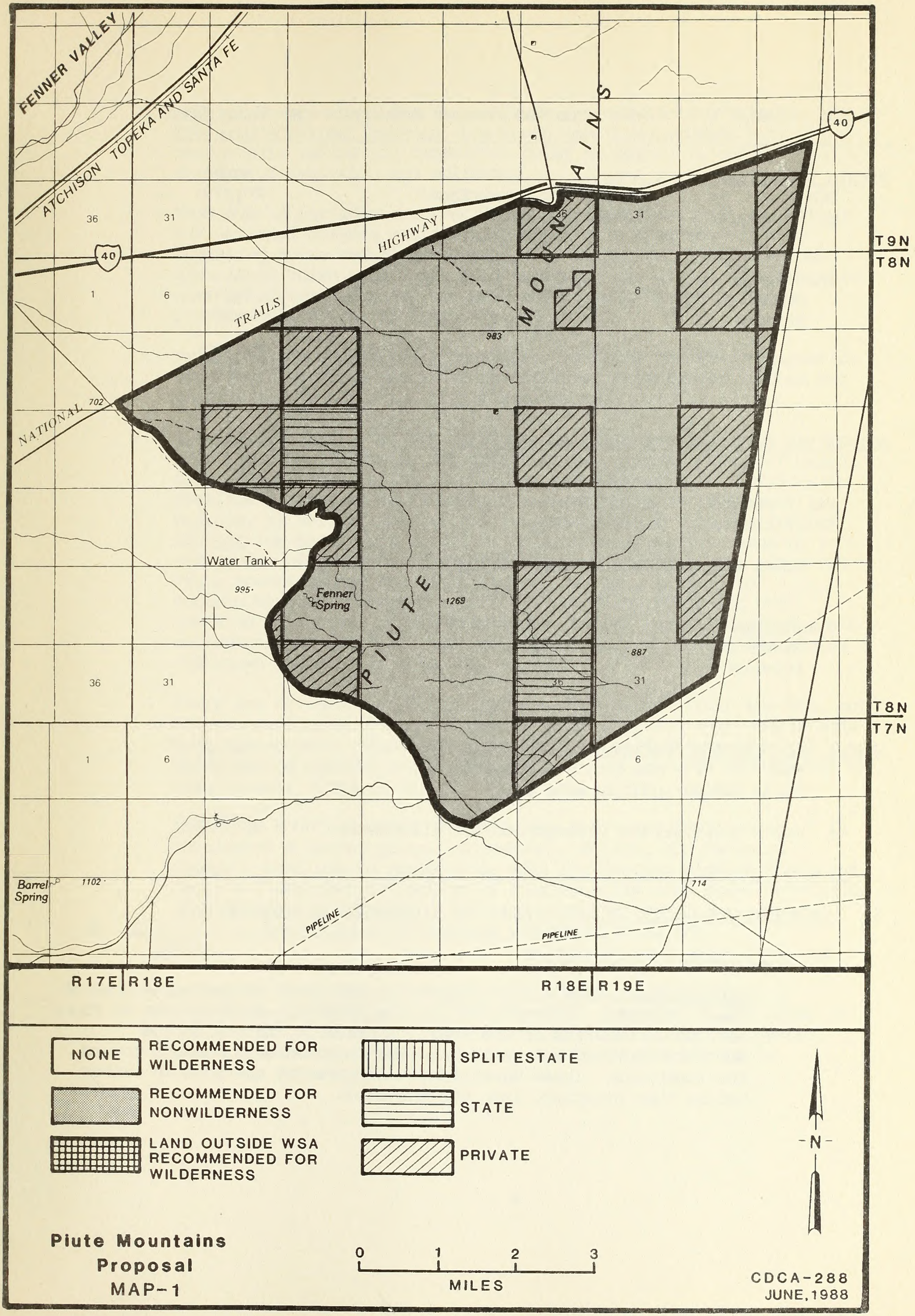
The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The no-wilderness recommendation is based on the following rationale: (1) the WSA does not contain any noteworthy special features and would not contribute to the diversity of the National Wilderness Preservation System; (2) there is almost no demand for primitive recreational opportunities within this WSA; and (3) manageability as wilderness is complicated by the presence of sizable non-Federal inholdings.

The Piute Mountains WSA, while natural in character, contains no unusual features or resources, and is merely an area of undeveloped public land. Designation of this area as wilderness would not contribute to the diversity of the National Wilderness Preservation System. It is ecologically similar to other areas identified for wilderness designation. Within 50 miles are ten other BLM study areas recommended for addition to the National Wilderness Preservation System. Many of these ten areas display the same ecosystem and landforms as this WSA, and also contain notable special features of scientific and general sightseeing interest.

There are approximately three miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use. The WSA receives low recreation use (less than 100 visitor-use days annually), which is almost exclusively motorized use for rockhounding and upland game hunting. Demand for primitive recreation opportunities in this WSA is virtually nonexistent. The area receives little use presumably because there is little to attract visitors, who are drawn instead to the other nearby areas containing a wealth of special features.

Manageability as wilderness is complicated by the presence of considerable non-Federal inholdings. Approximately 30% of the Piute Mountains WSA is composed of non-Federal lands. This sizable acreage, consisting of numerous individual parcels, would have to be acquired to assure that uses incompatible with wilderness management do not occur. Its location in a north-south alignment throughout the WSA would further impact the Bureau's ability to manage the area as a unit.


FENNER VALLEY
ATCHISON TOPEKA AND SANTA FE
40
NATIONAL TRAILS HIGHWAY
PIUTE MOUNTAINS
T9N
T8N
T7N
36
31
1
6
702
983
Water Tank
995
Fenner Spring
1269
887
35
Barrel Spring
1102
714
PIPELINE
R17E
R18E
R19E
NONE
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES

Piute Mountains Proposal
MAP-1

CDCA-288
JUNE, 1988

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	20,279
Split Estate	(BLM surface only)	0
Inholdings		
State		1,374
Private		6,869
Total		28,522

Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	0
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		0
Inholdings		
State		0
Private		0

Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	20,279
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		20,279

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: With a few exceptions, this area is generally free of human imprints. Evidence of motorized vehicle activity can be found near the boundaries of the area. A few ways, mainly in the northern section, run from the eastern and western borders toward the foothills. These ways either disappear or are lost in washes before they penetrate into the mountains.

2. Solitude: Opportunities for solitude are available within the WSA. The area's washes, canyons, and rough landforms provide both topographic relief and vegetative cover necessary to convey a feeling of isolation and solitude.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: Although the WSA does provide opportunities for a primitive recreational experience, it does not contain any features to attract visitor use.

4. Special Features: Two BLM sensitive wildlife species occur in the WSA, the desert tortoise and desert bighorn sheep. The tortoise is also under status review by the U.S. Fish and Wildlife Service for possible listing as threatened or endangered. The flats and bajadas, as well as some of the larger washes of the WSA provide habitat for the desert tortoise; population densities range up to 50 per square mile. Bighorn sheep range is only transient, since the Piute Mountains are too small and too sparsely watered to accommodate a permanent population. The Piute Mountains WSA contains no unusual plant assemblages, no BLM sensitive plants, and no Federal- or State-listed rare, threatened, or endangered plants are known to occur in this WSA.

   There are no inventoried cultural resource sites within the WSA, but the archaeological record of nearby areas suggests that prehistoric humans seasonally exploited vegetation and wildlife species here. There are no special areas of known cultural resource sensitivity or significance within this WSA.

   The Piute Mountain Range, known to the Mohave as "Kwikantsoka," is considered a sacred place. Chemehuevi, Mohave, and Panamint Shoshone continue to employ this area for hunting bighorn sheep and deer, and seasonal collection of traditionally used plant materials.

B. Diversity in the National Wilderness Preservation System (NWPS)

1. Assessing the diversity of natural systems and features as represented by ecosystems: The WSA falls contains 20,279 acres of the American Desert Province - Creosote bush (Larrea) ecosystem, which is widespread throughout the California Desert and is currently represented within the NWPS.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas areas	NWPS Areas acres	Other BLM Studies areas	Other BLM Studies acres
NATIONWIDE				
American Desert/Creosote Bush	1	343,753	117	4,247,630
CALIFORNIA				
American Desert/Creosote Bush	1	343,753	88	3,633,826

2. Expanding the opportunities for solitude or primitive recreation within a days driving time (five hours) of major population centers: The WSA is within a five-hour drive of six major population centers. Table 3 summarizes the number and acreage of wilderness areas and other BLM study areas within a five-hour drive of these population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas areas	NWPS areas acres	Other BLM Studies areas	Other BLM Studies acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Bakersfield	32	4,071,358	128	3,998,548
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Riverside-San Bernardino	22	2,031,054	205	7,658,649
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The closest designated area is Joshua Tree Wilderness at Joshua Tree National Monument, approximately 55 air miles southwest. Ten BLM study areas recommended for wilderness designation are within 50 air miles of the Piute Mountains WSA, nine in the California Desert District and one in Arizona's Phoenix District.

C. Manageability

The Piute Mountains WSA is manageable as wilderness. However, if left unresolved, two factors would severely complicate manageability: the WSA borders a paved highway, and the WSA is composed of approximately 30% private and state land.

On the north the WSA borders directly on the National Trails Highway (former U.S. Route 66). Since there is no longer a right-of-way on record, the WSA boundary is the edge of the paved surface. However, San Bernardino County continues to maintain the route, an action that could not be allowed were the WSA to be designated wilderness.

Approximately 30% of the Piute Mountains WSA is composed of non-Federal lands. This sizable acreage, consisting of numerous individual parcels and two bands of north-south aligned sections, would have to be acquired to assure that uses incompatible with wilderness management do not occur. Under the County General Plan designation the parcels are designated for Rural Conservation (RCN-40) with a 40-acre minimum. Zoning is considered to be "A-1-5" which allows five acre parcels. If fully developed, over 1000 private parcels could be allowed within the WSA, under current planning guidelines.

A portion of the Lazy Daisy grazing allotment is within the WSA. Of the total 3,192 Animal Unit Months (AUMs) available in the lease, approximately 261 AUMs (8.2 percent) are within the boundaries of the WSA. Few conflicts are expected; however, should the area be designated as wilderness, construction and maintenance of new range improvements could be hindered.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Piute Mountains WSA is within the Piute Mountains Geology-Energy-Minerals (G-E-M) Resource Area (GRA). GRA file data as it specifically relates to this WSA had not been fully analyzed and interpreted when the preliminary wilderness recommendations were published as part of the 1980 CDCA Plan. However, the WSA was tentatively assigned potential for metals, uranium, thorium, barite, limestone, and oil and gas. As of December 12, 1979, there were no mining claims recorded within the WSA.

   The Needles Geologic Map Sheet, part of the Geologic Map of California (CDMG 1963), outlines small areas of Precambrian complex in this WSA which may contain marble outcrops. However, the potential for the occurrence of limestone remains uncertain.

The potential indicated in the 1980 GRA Report for the occurrence of uranium and thorium was based on airborne anomalies from a National Uranium Reconnaissance Evaluation (NURE) survey. These anomalies were possibly caused by potassium bearing minerals in granitic rocks. A research study by CDMG on open file (Rapp, John S., 1976, Uranium and Thorium in California, CDMG) indicates no uranium or thorium occurrences in this WSA.

A review of the metal mines and prospects listed in the 1980 GRA Report indicates this WSA had past production for copper. No doubt, there are showings of copper as indicated from a few mines and shafts shown on the 15-minute Fenner topographic map, possibly associated with other base metals and minor gold and/or silver that may have been produced in the vicinity. These mines and prospects are probably similar to the Piute gold-copper-lead mine about one-half mile north of this WSA (north of I-40) that produced over 150 tons of copper during the period from 1916 to 1917 as reported in Copper in California (California Division of Mines, 1948, Bulletin 144).

The potential for barite occurrence remains unknown as does the potential for oil and gas mentioned in the 1980 GRA Report. There has been no exploration or production of oil and gas.

Of the above-mentioned mineral commodities that occur to some degree in this WSA, namely copper, limestone, and possibly barite, none are considered to have more than a low occurrence potential and therefore no mineral occurrence potential map has been prepared.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Decision: No U.S. Geological Survey, U.S. Bureau of Mines or recent California Division of Mines and Geology mineral surveys were conducted in this area because the area was recommended nonsuitable for wilderness designation.

As of December 1987, no mining or exploration plans of operation have been filed with the BLM for areas within the WSA. Most mining claims within the WSA are located in the northwestern portion. As of December 1987 there were 77 unpatented mining claims within the WSA recorded with BLM.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	N/A	55	55	N/A	1,100	1,100
Placer	N/A	22	22	N/A	880	880
Mill Site	N/A	0	0	N/A	0	0
Total	N/A	77	77	N/A	1,980	1,980

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Naturalness may decline slightly over the long term at scattered sites due to the cumulative effects of continuing OHV recreation and the development of the private parcels. Wilderness values will be retained in the portions of the WSA not subjected to this or other surface disturbing uses.

2. Impact on Sensitive Wildlife Species: Future planned actions will be subject to environmental analysis to identify any potential impacts to desert tortoise or desert bighorn sheep, allowing development and implementation of appropriate mitigation measures.

3. Impact on Native American Uses and Values: Native American access to traditional collection areas and religious sites will be retained. Sacred features will be protected under the American Indian Religious Freedom Act. Any changes in physical appearance or use of sacred sites will be made only with the concurrence of the affected Native American group.

4. Impact on Cultural Resources: All proposed surface-disturbing activities will be subjected to environmental analysis to allow the detection and salvage of any resources.

5. Impact on Development and Use of Private Land: All parcels would be useable and developable following County established guidelines.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA-Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Known inaccuracies are noted in parentheses.

1. Inventory Phase: During this stage, the Piute Mountains WSA and neighboring Essex WSA (CDCA-288A) were considered one area. This decision was re-evaluated on the basis of public comments which mentioned a road through the middle of the area, resulting in the division of the original area into the two WSAs. Some respondents disagreed with the findings concerning opportunities available in WSA 288 for solitude and primitive recreation.

2. Study Phase: Of the 14 comments received on this WSA, 12 were opposed and two favored further wilderness consideration.

Texaco Corporation noted the potential for oil, gas, and geothermal resources in the unit (there is no identified potential for any of these resources). The Santa Fe Railroad Company stated that off-highway vehicle access would be needed for drainage surveys, flash flood surveys, derailments, and to maintain dikes. The Southern Pacific Land Company was concerned about the large amount of Southern Pacific-owned land in the WSA and about access to property under lease for minerals. A mining company was concerned about access for off-highway haul trucks to an area leased for limestone.

Several features were mentioned which respondents believed were incompatible with wilderness classification. These included sights and sounds such as powerlines and facilities, a railroad station, city lights, the use of roads by heavy vehicles during the cattle-moving season, grazing facilities, a maintained ranch road, and a windmill.

Wilderness proponents said that the area meets the 2(c) criteria of the Wilderness Act, and that it offers outstanding opportunities for solitude and primitive recreation.

No comments were received in response to the Public Input Workbook of 3/15/79.

3. Draft Plan Alternatives: Few public comments specific to this WSA were received in response to the Draft Plan Alternatives. However, this WSA was one of those opposed by the National Outdoor Coalition (NOC), a coalition of mining, rockhounding, and off-highway vehicle organizations. A large number of club members sent in letters and printed coupons supporting the position of NOC, which was a recommendation for a multiple-use classification of "moderate use" for this unit. This recommendation was in agreement with the Balanced and Use Alternatives. Conservation groups also sent in many letters supporting the Protection Alternative, which recommended wilderness designation for WSA 288.

4. Proposed Plan: There were few specific comments on this WSA. The NOC and others opposed to wilderness were satisfied with the Proposed Plan, which recommended a "moderate use" classification for WSA 288. Wilderness proponents were not happy with the recommendation but did not conduct a letter-writing campaign on this unit.

   No comments were received from local governments.

Essex

CDCA 288A

ESSEX WILDERNESS STUDY AREA (WSA)

(CDCA-288A)

1. THE STUDY AREA --- 17,096 acres

The Essex WSA is located in eastern San Bernardino County, near the eastern edge of the California Desert Conservation Area (CDCA). The nearest city is Needles, California, 25 road miles east. The study area contains 13,331 acres of public land administered by the Bureau of Land Management (BLM), 648 acres of State land, and private inholdings totalling 3,117 acres (see Map 1 and Table 1).

The WSA's eastern boundary is a mine access road which separates this WSA from the neighboring Piute Mountains WSA (CDCA 288). The northern boundary is formed by the Old National Trails Highway. The western boundary follows section lines and Sunflower Spring Road south for approximately six miles until it reaches the unmaintained ranch road which forms the southern boundary.

The WSA is 55% alluvial fans and 45% hills and mountains. The alluvial fans are sparsely vegetated with creosote bush scrub, while vegetation becomes more dense and varied at higher elevations. The mountains are jagged and colorful, with steep-walled canyons. The greatest topographic relief is in the southern portion of the WSA, where the highest peak reaches an elevation of over 3,600 feet. The study area contains one permanent water source, Barrel Spring, on private property at the southern end of the area.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EISs) for the CDCA Plan: protection, use, balanced, and no action: a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

0 acres recommended for wilderness
13,331 BLM acres recommended for nonwilderness

No wilderness is the recommendation for the Essex WSA. The entire acreage in this WSA is released for uses other than wilderness. Management guidelines will be implemented using all practical means to avoid or mitigate environmental impacts.

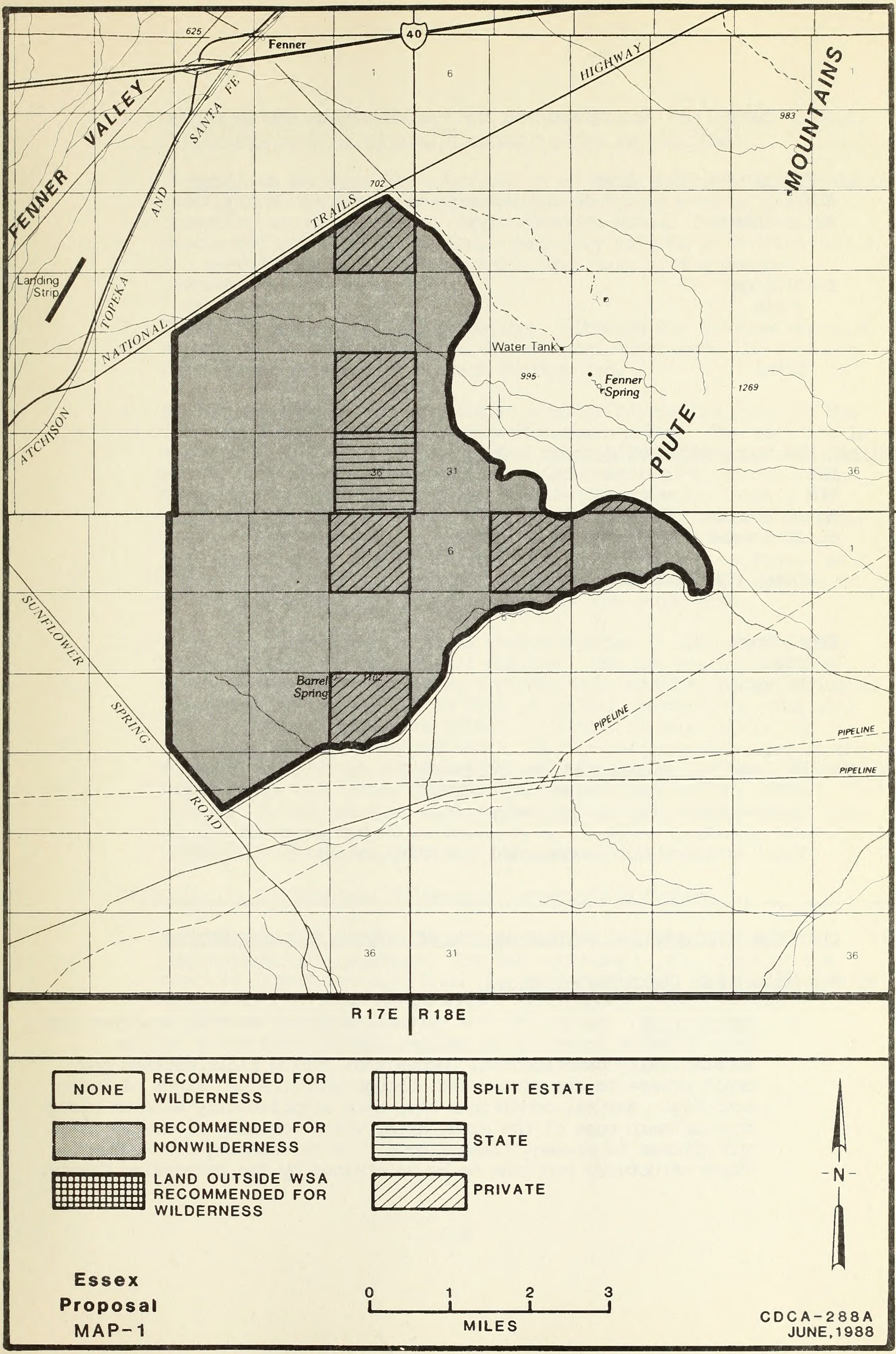
The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The no wilderness recommendation is based on the following rationale: (1) designation of this area as wilderness would not contribute any additional unique or interesting features to the National Wilderness Preservation System; and (2) a portion of the WSA has high potential for sand and gravel, for which there is demonstrated demand.

The Essex WSA, while natural in character, contains no unusual features or resources, and is merely an area of undeveloped public land. It is ecologically similar to other areas identified for wilderness designation. Within 50 miles are ten other BLM study areas recommended for addition to the National Wilderness Preservation System. Many of these ten areas display the same ecosystem and landforms as this WSA, and also contain notable special features of scientific and general sightseeing interest.

The WSA receives low recreation use (less than 100 visitor-use days annually), which is almost exclusively motorized use for rockhounding and upland game hunting. Demand for primitive recreational opportunities in this WSA is virtually nonexistent. The area receives little use presumably because there is little to attract visitors, who are drawn instead to the other nearby areas containing a wealth of special features. There are no known primitive routes within the WSA.

Deposits of sand and gravel occur along the northern edge of the WSA. The primary demand for this material is from the Atchison, Topeka and Santa Fe Railroad and the California Department of Transportation (CalTrans) for diversion dikes, flood control, and highway maintenance. CalTrans now extracts sand and gravel immediately north of the WSA, from an authorized material site that extends inside the study area. The material site authorization predated the establishment of the WSA, and extraction could proceed even in the event of wilderness designation.


625
Fenner
40
1
6
HIGHWAY
MOUNTAINS
983
FENNER VALLEY
SANTA FE
AND
TOPEKA
ATCHISON
702
TRAILS
NATIONAL
Landing Strip
Water Tank
995
Fenner Spring
1269
PIUTE
36
31
36
T8N
T7N
1
6
1
SUNFLOWER SPRING ROAD
6
Barrel Spring
1102
PIPELINE
PIPELINE
PIPELINE
36
31
36
R17E
R18E
NONE
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES

Essex Proposal
MAP-1

CDCA-288A
JUNE, 1988

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	13,331
Split Estate	(BLM surface only)	0
Inholdings		
State		648
Private		3,117
Total		17,096

Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	0
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		0
Inholdings		
State		0
Private		0

Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	13,331
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		13,331

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: Except for the northern edge of the WSA, the area has been affected primarily by natural forces, with man's imprint substantially unnoticeable. Occasional mining claim markers and small prospects are widespread, though unobtrusive, signs of human activity. Natural conditions have been significantly altered along the northern edge of the study area, which contains diversion dikes and ditches to prevent flash floods from threatening Old Route 66. These structures continue to be maintained by San Bernardino County.

2. Solitude: Primitive character, low visitation, and rugged mountain topography combine to ensure opportunities for solitude.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: Although the WSA does provide opportunities for a primitive recreational experience, it does not contain any features to attract visitor use.

4. Special Features: Two BLM sensitive wildlife species occur in the WSA, the desert tortoise and desert bighorn sheep. The tortoise is also under status review by the U.S. Fish and Wildlife Service for possible listing as threatened or endangered. Tortoise densities range up to 50 per square mile. Bighorn sheep range is only transient, since the Piute Mountains are too small and too sparsely watered to accommodate a permanent population. The Essex WSA contains no other BLM sensitive wildlife species and no State- or Federal- or State-listed rare, threatened or endangered species of wildlife or plants are known to occur in the study area.

   There are three known cultural resource sites in the southwestern corner of the WSA, near Barrel Springs. Two are historic mining claim cairns; the other, one of prehistoric occupation, as indicated by pottery sherds and debris from stone tool production. The site also has buried components within culturally-altered soils, or midden, at least two meters thick. A three square mile area in the southern part of the WSA has been assigned a high cultural resources sensitivity, and likely contains additional prehistoric sites, although it has not been systematically surveyed. The eastern half of the WSA continues to be employed by Chemehuevi, Mohave, and Panamint Shoshone for deer hunting and seasonal collection.

B. Diversity in the National Wilderness Preservation System

1. Assessing the diversity of natural systems and features as represented by ecosystems: The WSA contains 13,331 acres of the American Desert/Creosote Bush (*Larrea*) ecosystem. This ecosystem is represented by other areas either included or identified for wilderness preservation.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas areas	NWPS Areas acres	Other BLM Studies areas	Other BLM Studies acres
	NATIONWIDE			
American Desert/Creosote Bush	1	343,753	117	4,254,578
	CALIFORNIA			
American Desert/Creosote Bush	1	343,753	88	3,640,774

2. Expanding the opportunities for solitude or primitive recreation within a days driving time (five hours) of major population centers: The WSA is within a five-hour drive of six major population centers. Table 3 summarizes the number and acreage of wilderness areas and other BLM study areas within a five-hour drive of these population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas areas	NWPS areas acres	Other BLM Studies areas	Other BLM Studies acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Bakersfield	32	4,071,358	128	3,998,548
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Riverside-San Bernardino	22	2,031,054	205	7,658,649
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The closest designated wilderness area is Joshua Tree Wilderness within the Joshua Tree National Monument, approximately 50 air miles southwest. Ten BLM study areas recommended for wilderness designation are within 50 air miles of the Essex WSA, nine in the California Desert District and one in Arizona's Phoenix District.

C. Manageability

The Essex WSA is manageable as wilderness. However, two factors would severely complicate manageability: the fact that the WSA directly borders a paved highway, and the presence of an authorized materials site inside the north edge of the study area.

On the north the WSA borders directly on the National Trails Highway (formerly U.S. Route 66). Since there is no longer a right-of-way on record, the WSA boundary is the edge of the paved surface. However, San Bernardino County continues to maintain the route, an action that could not be allowed were the WSA to be designated wilderness.

Approximately half of an authorized CalTrans sand and gravel materials site is within the WSA. Although to date CalTrans has only removed material from outside the WSA, the agency was authorized to remove material from inside the study area before it became a WSA.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Essex WSA is within the Piute Mountains Geology-Energy-Minerals (G-E-M) Resource Area (GRA). GRA file data as it specifically relates to this WSA had not been fully analyzed and interpreted when the preliminary wilderness recommendations were published as part of the 1980 CDCA Plan. However, the WSA was tentatively assigned a known potential for limestone, and an unclassified potential for sand and gravel, unspecified metals, uranium, and thorium. As of December 12, 1979, there were six unpatented mining claims within the Essex WSA.

   Review of the pre-1980 California Division of Mines and Geology (CDMG) mineral commodity publications identified no significant copper, gold, lead, zinc, or uranium occurrences. Because of the lack of documentation of any metallic occurrence in this WSA, it is reasonable to consider the occurrence potential for metals, uranium, and thorium as low.

   The potential for limestone occurrence remains uncertain, but as in the Piute Mountains WSA to the northeast, small areas outlined as Precambrian rock complex may contain marble outcrops with limestone potential. CalTrans is presently using a large sand and gravel quarry immediately outside the northwestern boundary of the WSA. Over 200 million cubic yards of material has been mined from this location.

Therefore, the two areas of sand and gravel that extend into the WSA from this deposit are classified as having a high potential for sand and gravel. Map 2 reflects the mineral resource potential of the WSA.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Decision: The U.S. Geological Survey and the U.S. Bureau of Mines have not conducted any mineral surveys in this WSA, nor has there been any recent CDMG survey because the area was recommended nonsuitable for wilderness designation.

   As of December 1987, no mining or exploration plans of operation had been filed for areas within this WSA. Unpatented claims are concentrated in the northwest portion of the study area. As of December 1987 there were 36 unpatented claims inside the WSA recorded with BLM, as summarized below.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	N/A	36	36	N/A	720	720
Placer	N/A	0	0	N/A	0	0
Mill Site	N/A	0	0	N/A	0	0
Total	N/A	36	36	N/A	720	720

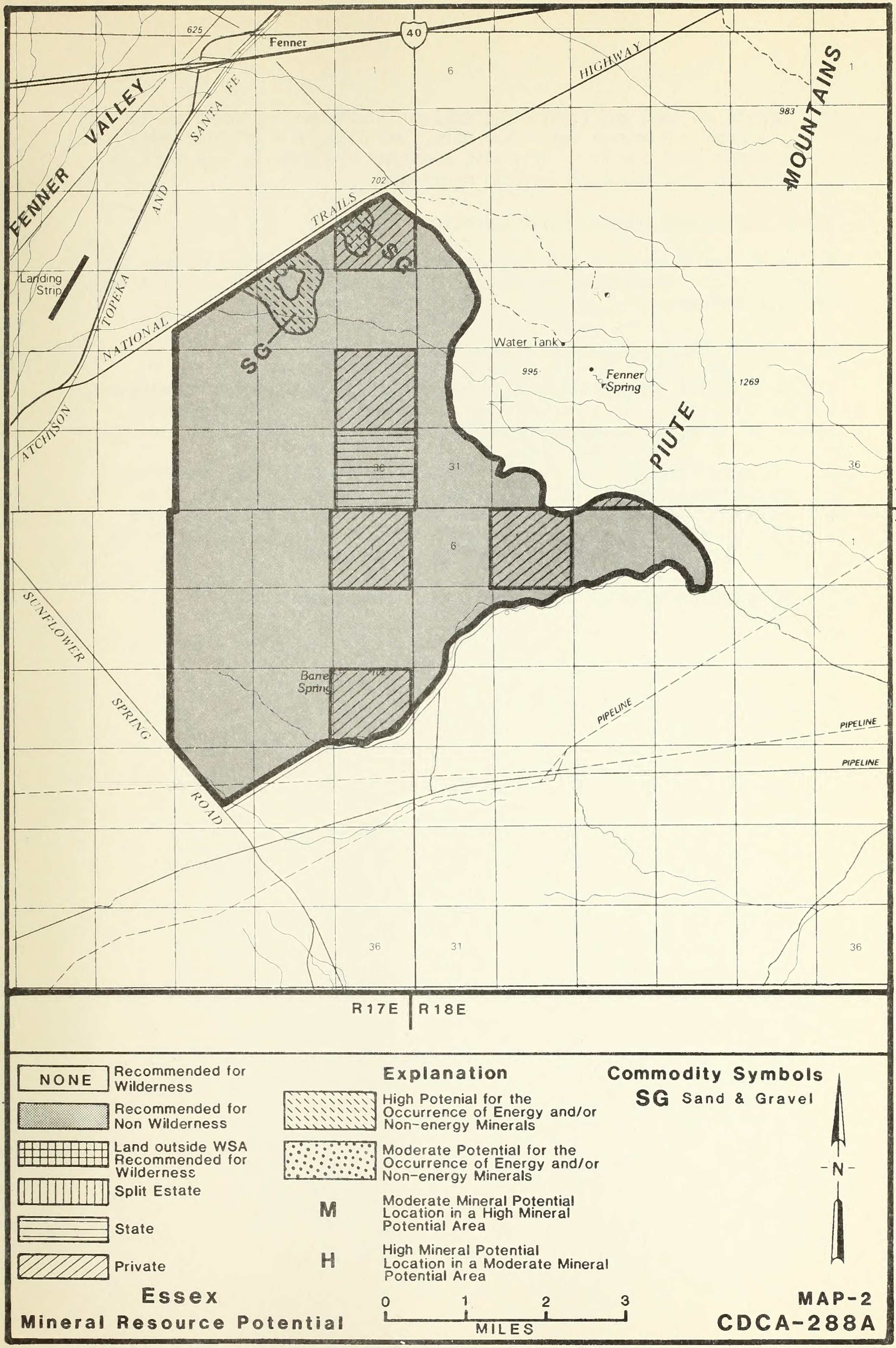
E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Wilderness values will significantly decline in the northern portion of the WSA when sand and gravel extraction occurs. Naturalness may decline slightly at scattered sites due to the cumulative effects of continuing OHV recreation. Wilderness values will be retained in the portions of the WSA not subjected to these two uses.

2. Impact on Sensitive Wildlife Species: Future planned actions will be subject to environmental analysis to identify any potential impacts to desert tortoise or desert bighorn sheep, allowing development and implementation of appropriate mitigation measures.

3. Impact on Native American Uses and Values: Native American access to traditional collection areas will be retained.

4. Impact on Cultural Resources: All proposed surface-disturbing activities will be subjected to environmental analysis to allow the detection and salvage of any resources. Some sites may be unintentionally damaged by casual OHV use.


Fenner
40
625
FENNER VALLEY
SANTA FE
AND
TOPEKA
ATCHISON
HIGHWAY
TRAILS
NATIONAL
702
MOUNTAINS
983
Landing Strip
SG
SG
Water Tank
995
Fenner Spring
1269
PIUTE
36
31
36
T8N
T7N
6
1
6
1
SUNFLOWER
SPRING
ROAD
Barrel Spring
PIPELINE
PIPELINE
PIPELINE
36
31
36
R17E
R18E
NONE Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potential for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
SG Sand & Gravel
N
0 1 2 3
MILES

Essex
Mineral Resource Potential

MAP-2
CDCA-288A

5. Impact on Sand and Gravel Extraction: CalTrans may continue to use its sand and gravel materials site, including the portion that extends into the WSA. BLM will consider requests from other entities for saleable mineral materials.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA-Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. However, beyond the inventory phase, no comments were received that specifically addressed this WSA.

1. Inventory Phase: During this stage, the Essex WSA and neighboring Piute Mountains WSA (CDCA-288) were considered one area. This decision was re-evaluated on the basis of public comments which mentioned a road through the middle of the area, resulting in the division of the original area into the two WSAs.

   No comments were received from local governments.

Bigelow Cholla Garden

CDCA 290

BIGELOW CHOLLA GARDEN WILDERNESS STUDY AREA (WSA)

(CDCA-290)

1.	THE STUDY AREA ---	14,337	acres

The Bigelow Cholla Garden WSA is located in eastern San Bernardino County, near the eastern edge of the California Desert Conservation Area (CDCA). The nearest community is Needles, California, situated along the Colorado River, approximately 18 miles east of the WSA. The study area contains 10,105 acres of public land under the jurisdiction of the Bureau of Land Management (BLM), 779 acres of State land, and private inholdings totalling 3,453 acres (see Map 1 and Table 1).

This elongated, triangular WSA has its northern border as Interstate 40. The southeastern border is a gas pipeline right-of-way. The southeastern boundary is a powerline right-of-way.

The Bigelow Cholla Garden WSA contains 60% hills, 20% dissected fans, ten percent alluvial fans, and five percent pediments. The major landform feature of the area is the northern end of the Sacramento Mountains. The mountains consist of very dark rock of volcanic origin, highly eroded and displaying much vertical relief. Elevations within the WSA range from 1,400 feet in the sharply eroded bajada at the eastern end of the WSA to 3,314 feet at Bannock, the highest peak.

The densest concentration of Bigelow cholla cactus in the California Desert occurs within the WSA and the surrounding area, and has been designated as the Sacramento/Stepladder Mountains Teddy-bear cholla Unusual Plant Assemblage (UPA) by the CDCA Plan. The southern half of the 80-acre Bigelow Cholla Natural Area, which is withdrawn from mineral entry and closed to vehicles, is included within the boundaries of the WSA.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EISs) for the CDCA Plan: protection, use, balanced, and no action; a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2.	RECOMMENDATION AND RATIONALE ---	0	acres recommended for wilderness
		10,105	BLM acres recommended for nonwilderness

No wilderness is the recommendation for the Bigelow Cholla Garden WSA. The entire acreage in this WSA is released for uses other than wilderness. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

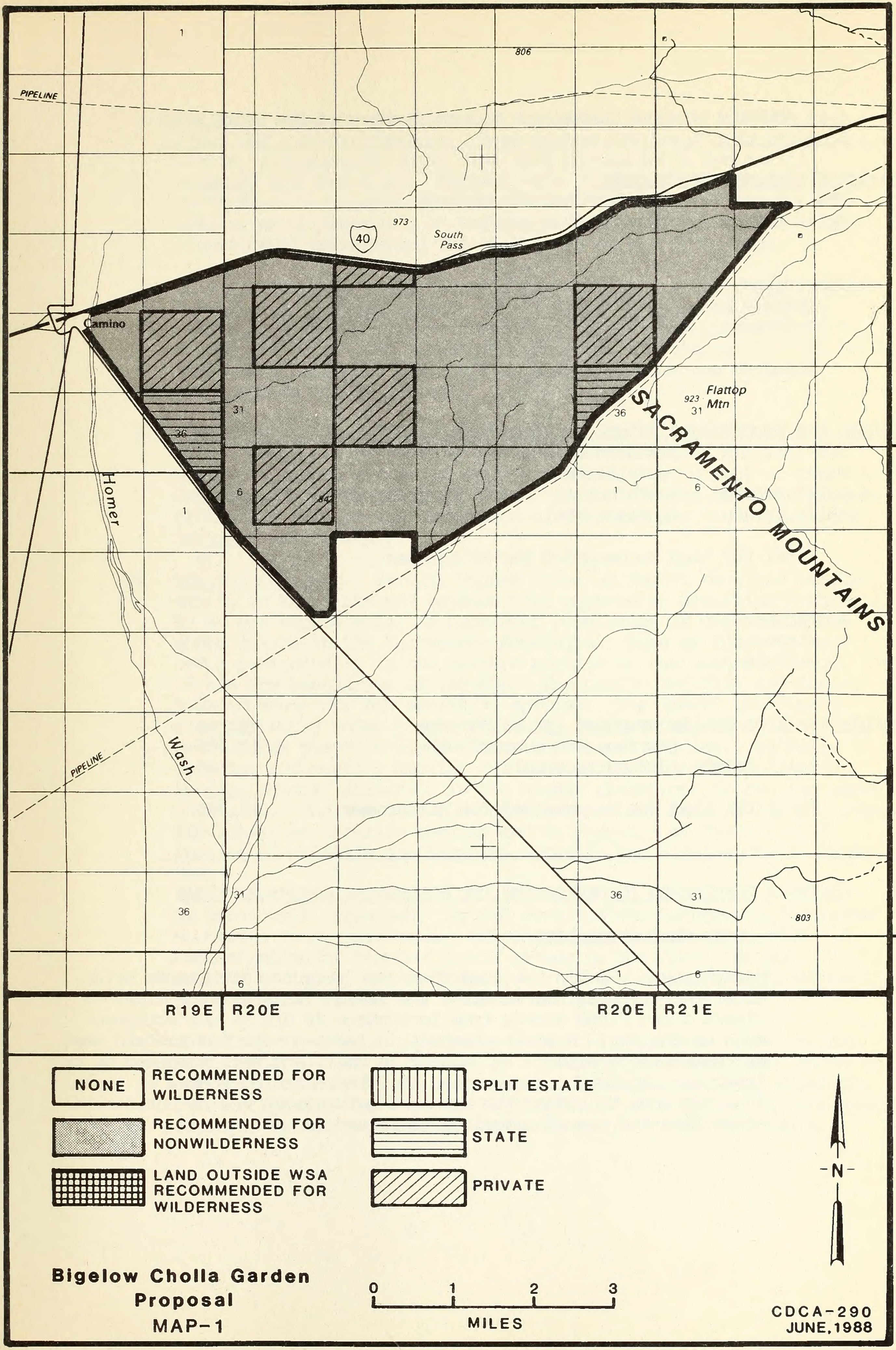
The no-wilderness recommendation is based on the following rationale: (1) the area does not possess any unique or outstanding features that are not represented in areas either already part of, or recommended for inclusion within the National Wilderness Preservation System; and (2) the area's value as wilderness is overshadowed by its value for motorized recreation, mineral development, and energy transmission.

There are no unique special features in this WSA. The WSA's topography and vegetation are very similar to that found in nearby wilderness study areas that are recommended suitable. Aside from the Bigelow cholla garden, the WSA is comprised of common desert plant assemblages and contains no unique or special wildlife habitats or populations. An abundance of areas in the general region are recommended for addition to the National Wilderness Preservation System. The study area is within 50 air miles of 14 BLM WSAs recommended for wilderness designation.

Recreational use of the WSA is almost 1,000 visitor-use days annually. Almost all of this use is vehicle based, and would therefore be displaced by wilderness designation. The most popular activities are four-wheel drive sightseeing and touring. Most recreation use is generated locally from the Needles and Mohave Valley areas, as the WSA's proximity is ideal for day use visits. There are approximately two miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use. Other activities known to occur include rockhounding, upland game hunting, target shooting, and nature study. The Universities of California, among others, use the portion of the UPA in the northern extremes of the WSA as a teaching and research site. This area receives up to four visits annually by educational institutions. The WSA attracts very little hiking and backpacking use.

The northern portion of the WSA has moderate potential for gold, silver, copper, and barite. Wilderness designation would preclude further exploration for these minerals.

Designating the study area as wilderness would have potential to conflict with development of future communication and energy transmission facilities. The north boundary is within a energy and utility transmission corridor designated by the CDCA Plan, which is also the route of a four to six mile wide utility corridor for the state of California identified in the Western Regional Corridor Study (1980). The west boundary is also within an area identified as a planned corridor for the period 1990-2020 by the Western Regional Corridor Study.


PIPELINE
806
973
40
South Pass
Camino
31
36
6
1
84
Homer Wash
Flattop Mtn
923
SACRAMENTO MOUNTAINS
T9N
T8N
T7N
803
PIPELINE
R19E
R20E
R21E
NONE
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES

Bigelow Cholla Garden Proposal
MAP-1

CDCA-290
JUNE, 1988

TABLE 1 - Land Status and Acreage Summary of the Study Area

		Acres
Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	10,105
Split Estate	(BLM surface only)	0
Inholdings		
State		779
Private		3,453
Total		14,337
Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	0
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		0
Inholdings		
State		0
Private		0
Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	10,105
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		10,105

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: Within the area there are very few structures which alter the primeval character of the land. Two diversion dikes to divert flash flood waters from Interstate 40 are at the northern edge of the WSA. A small prospect is located near the eastern edge of the southern border. This scar is small and well screened by the irregular topography surrounding it. There are no routes of travel into the area to reduce the apparent naturalness and no noticeable scars from the use of motorized vehicles.

2. Solitude: The area's irregular topography and size helps screen views and isolate visitors. Most washes are lined with ironwood, acacia, and mesquite which also tend to support a feeling of solitude and isolation. However, the sights and sounds of traffic on Interstate 40 penetrate into the northern edge of the WSA for a mile or more, depending on topography. This intrusion is significant, considering the small size of the study area.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: Opportunities for hiking and nature study are enhanced by the area's naturalness and well-developed system of washes which provide access to most of the WSA. The presence of the Bigelow cholla "garden" in the northern extreme of the WSA adds to the importance of the area for both formal and informal nature study.

4. Special Features: Several square miles of desert tortoise habitat exists on the flats and bajadas with population densities ranging up to 50 per square mile. A permanent population of desert bighorn sheep exists in the Sacramento Mountains. Some of these animals occur periodically in the western portion of the mountain range within the boundaries of the WSA. The desert tortoise and desert bighorn sheep are BLM sensitive species. The desert tortoise is also currently under status review by the U.S. Fish and Wildlife Service for possible listing as a threatened species. Suitable foraging and nesting habitat for some of the more common raptor species exists, primarily in the higher elevations of the Sacramento Mountains. The WSA does not contain important habitat for any other BLM sensitive wildlife species and no Federal- or State-listed species of wildlife are known to occur in the Bigelow Cholla Garden WSA.

   As previously discussed, the WSA contains the Sacramento/Stepladder Mountains Teddy-bear cholla UPA which contains the densest concentration of Bigelow cholla cactus in the CDCA. No BLM sensitive plants, and no Federal- or State-listed rare, threatened, or endangered plants are known to occur in this WSA.

   The study area is of importance to Native Americans. The northern portion of the WSA is crossed by a trading route and trail which is currently used by Mohave and Chemehuevi Indians residing along the Colorado River. Included in the Bigelow Cholla Garden WSA are areas employed by Native Americans for collection of hawk and eagle feathers, which figure importantly in Native American religious beliefs. Many of the peaks in the Sacramento Range are referred to in Mohave oral traditions, and have religious and seasonal ritual importance. Native Americans have expressed concern that these areas remain open for their traditional collection and ritual uses.

There have been no systematic surveys to identify cultural resources within the WSA.

B. Diversity in the National Wilderness Preservation System (NWPS)

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 10,105 acres of the American Desert/Creosote Bush ecosystem. This province is widespread throughout the California Desert and is currently represented within the NWPS.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas		Other BLM Studies	
	areas	acres	areas	acres
	NATIONWIDE			
American Desert/Creosote Bush	1	343,753	117	4,257,804
	CALIFORNIA			
American Desert/Creosote Bush	1	343,753	88	3,644,000

2. Expanding the opportunities for solitude or primitive recreation within a days driving time (five hours) of major population centers: The WSA is within a five-hour drive of six major population centers. Table 3 summarizes the number and acreage of wilderness areas and other BLM study areas within a five-hour drive of these population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas areas	NWPS areas acres	Other BLM Studies areas	Other BLM Studies acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Bakersfield	32	4,071,358	128	3,998,548
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Riverside-San Bernardino	22	2,031,054	205	7,658,649
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The closest designated area is the Joshua Tree Wilderness in Joshua Tree National Monument, approximately 60 air miles southwest. Within 50 air miles of the Bigelow Cholla Garden WSA are 14 BLM study areas recommended for wilderness designation: seven in the California Desert District, five in Arizona's Phoenix District, and two in Arizona's Yuma District.

C. Manageability

The Bigelow Cholla Garden WSA is manageable as wilderness. However, several factors complicate manageability.

The WSA's proximity to the city of Needles would complicate management as local residents have enjoyed a long history of motorized recreation use of the area. Long-term use patterns may be difficult to change. Management as wilderness would thus require a significant field presence, particularly at first, to ensure the integrity of the area.

Preservation of wilderness values could not be assured without acquisition of inholdings, which constitute 30% of the total land area of this WSA.

Designating the study area as wilderness has potential to conflict with development of future communication and energy transmission facilities. The north boundary is within a utility corridor identified both in the CDCA Plan and the Western Regional Corridor Study (1980). This corridor has not reached its development capacity although many of the 16 utility corridors identified in the CDCA Plan are nearing capacity. Wilderness designation of the Bigelow Cholla Garden WSA could prohibit full development of the corridor, forcing installation of new energy transmission lines in other corridors or in areas not previously disturbed. Depending upon which WSAs are ultimately designated wilderness within the CDCA, there may be constraints placed upon long-term energy and communication transmission capabilities in the southwestern United States.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

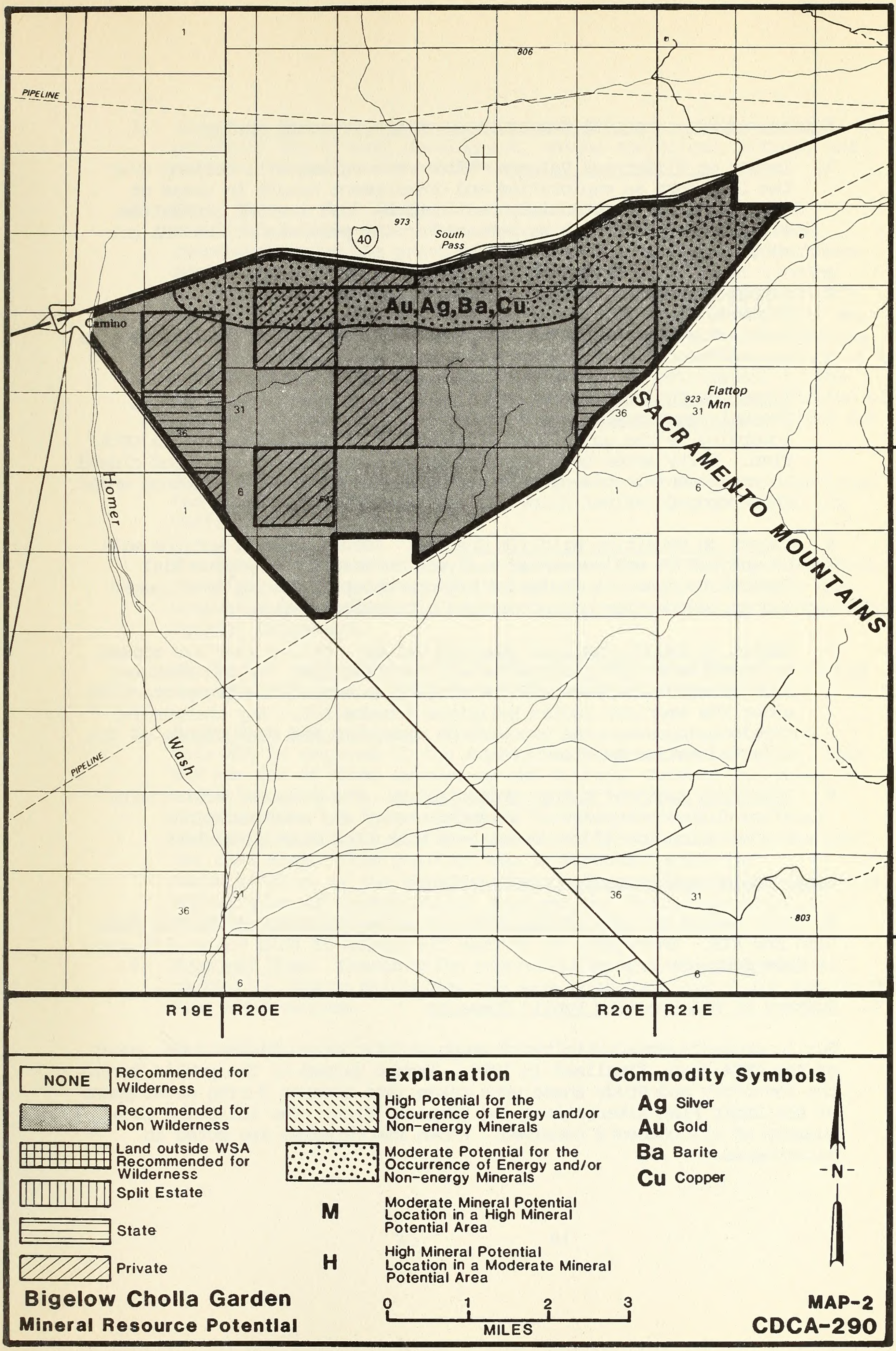
1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Bigelow Cholla Garden WSA is in the BLM Sacramento Mountains Geology-Energy-Minerals (G-E-M) Resource Area (GRA). The G-E-M analysis for this WSA was done in the EIS for the CDCA Plan and did not fully analyze, integrate, and interpret the available data. However, the EIS did state that the WSA has an unclassified potential for metals, and sand and gravel. As of December 12, 1979 there were no unpatented mining claims recorded with the BLM within the WSA.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Decision: No U.S. Geological Survey or U.S. Bureau of Mines mineral surveys were conducted for the WSA because it is recommended nonsuitable for wilderness designation. However, the California Division of Mines and Geology published an open file report in 1985 that assessed the mineral potential of the northeast quarter of the Needles one by two degree quadrangle map. The report indicated a moderate occurrence potential for gold, silver, copper and barite along the north part of the WSA (see Map 2). Mineralization occurs mainly along northeast-trending fault zones within Precambrian gneissic granite. Outcrops of these gneissic rocks can be seen along the north boundary of the WSA adjacent to Interstate 40.

   Three prospects are shown within this WSA, however, there was no reported mineral production.

   Sand and gravel also occurs in the southern and western extremities of the WSA. No interest has been expressed for these common mineral materials. Under the BLM classification system, sand and gravel resources would be considered at this time as having a low occurrence potential based solely on the favorable geologic environment.

   Prior to December 1987, one mining plan of operations had been filed with the BLM within the WSA. BLM records dated December, 1987, indicate no active unpatented mining claims are located within the WSA.


PIPELINE
806
973
40
South Pass
Au,Ag,Ba,Cu
Camino
Flattop Mtn
923
SACRAMENTO MOUNTAINS
Homer Wash
PIPELINE
803
1
31
36
6
T9N
T8N
T8N
T7N
R19E
R20E
R20E
R21E
NONE
Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M
Moderate Mineral Potential Location in a High Mineral Potential Area
H
High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
Ag Silver
Au Gold
Ba Barite
Cu Copper
N
0
1
2
3
MILES

Bigelow Cholla Garden
Mineral Resource Potential

MAP-2
CDCA-290

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Wilderness values will decline over the long term as exploration and development occurs in areas of moderate mineral potential, and in areas used for OHV recreation. Wilderness values will be retained in the portions of the WSA not subjected to these two uses.

2. Impact on Locatable Mineral Exploration and Development: The proposed action will have no impact. Further exploration and claim location can proceed subject to applicable laws and regulations plus any additional constraints stated in the CDCA Plan.

3. Impact on the Sacramento/Stepladder Mountains Teddy-bear Cholla Unusual Plant Assemblage: The UPA will continue to be managed according to the guidelines provided for this resource in the CDCA Plan. Forty acres have been withdrawn from mineral entry and closed to motor vehicle use, a protection measure which will continue under the Proposed Action.

4. Impact on Sensitive Wildlife Species: Future planned actions will be subject to environmental analysis to identify any potential impacts to desert tortoise or bighorn sheep, allowing development and implementation of appropriate mitigation measures.

5. Impact on Native American Uses and Values: Native American access to traditional religious sites will be retained. Sacred features such as mountain peaks will be subject to administrative protection under the American Indian Religious Freedom Act. Any changes in physical appearance or use will be made with the concurrence of the affected Native American groups.

6. Impact on Regional Energy Transmission: The proposed action will allow full development of existing energy and communications transmission corridors, consistent with CDCA Plan guidelines.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA-Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Known inaccuracies are noted in parentheses.

1. Inventory Phase: Comments indicated rockhounding interest, potential for mineral development, unique ecological factors, and natural integrity of the landscape.

2. Study Phase: Most of the nine comments received on this WSA mentioned factors which detract from wilderness quality. One respondent noted the presence of Interstate 40 along the northern border and the small village of Camino with an adjacent landing field. Mining activity was mentioned by two respondents, and one major oil company listed this WSA along with many others which may have potential for oil, gas, and geothermal resources. Rockhounds wanted the area kept open for their hobby. The nearby presence of a transmission line and pipeline was felt to be detrimental to the naturalness of the area. The City of Needles opposed restriction of access to materials for flood control. Access was also desired for railroad maintenance.

   Respondents favoring wilderness designation for this area mentioned the stands of teddy bear cholla, which are among the best in the California Desert.

   Two comments were received in response to the Public Input Workbook. The first mentioned the high biological values, particularly the unusually dense stand of Bigelow (teddy bear) cholla and recommended careful management.

   The second respondent was a rockhounding organization which wanted the area kept partly open for rockhounds and prospectors.

3. Draft Plan Alternatives: There were few comments specific to this WSA in response to the Draft Plan Alternatives. However, this WSA was one of those opposed by the National Outdoor Coalition, a coalition of mining, rockhounding, and off-highway vehicle organizations. A large number of club members sent in printed coupons supporting a multiple use classification of "moderate use" for this area. This position was in agreement with the recommendation of the No Action Alternative. Conservation-oriented individuals and organizations approved the Protection Alternative which recommended wilderness designation for this area.

4. Proposed Plan: Conservation organizations and vehicle-oriented recreation groups maintained the same positions stated for the Draft Plan Alternatives.

   No comments were received from local governments.

Sacramento Mountains

CDCA 292

SACRAMENTO MOUNTAINS WILDERNESS STUDY AREA (WSA)

(CDCA-292)

1. THE STUDY AREA --- 49,069 acres

The Sacramento Mountains WSA is located in eastern San Bernardino County, on the eastern edge of the California Desert Conservation Area (CDCA). The nearest community is Needles, California, approximately four miles to the east. The study area contains 34,582 acres of public land under the jurisdiction of the Bureau of Land Management (BLM), 2,227 acres of State land, and private inholdings totalling 12,260 acres (see Map 1 and Table 1).

The WSA is bounded on the northwest by a Southern California Gas Company pipeline and service road. On the north, the boundary is an imaginary line running in a general east-west direction, drawn to avoid mining developments along the northern fringes of the mountain range. On the east, the boundary is a line roughly paralleling the base of the mountain range but excludes a large rock quarry complex near Eagle Pass. The southern boundary goes cross-country and is within a utility and energy transmission corridor identified in both the CDCA Plan and the 1980 Western Regional Corridors Study. The western boundary follows an imaginary line running in a general northwest-southeast direction roughly paralleling a transmission line and service road three miles to the east.

The Sacramento Mountains WSA lies at the center of the 18-mile long Sacramento Mountain range. Rugged rust-colored peaks, jagged ridges, and sloping terraces rise abruptly above the highly eroded bajada leading down to Needles and the Colorado River beyond. Dominant landmarks include Eagle Peak, 3,308 feet, near the center of the WSA, and the black volcanic peaks of Flat Top Mountain, 3,029 feet, at the northern end of the area. Eagle Pass forms the major break in the continuity of the range. Along the western margin of the WSA the mountain range slopes gently into the high desert setting of Ward Valley. The WSA contains 80% mountains, hills, and rock outcrops, with the remaining 20% composed of alluvial fans and washes. Creosote bush scrub is the major vegetation type of the WSA, with the creosote bush (Larrea tridentata), the dominant species. An unusually dense stand of teddy bear cholla cactus (Opuntra bigelovii) also occurs within the WSA.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EIS) for the CDCA Plan: protection, use, balanced, and no action; a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2.	RECOMMENDATION AND RATIONALE ---	0	acres recommended for wilderness
		34,582	BLM acres recommended for nonwilderness

No wilderness is the recommendation for the Sacramento Mountains WSA. The entire acreage in this WSA is released for uses other than wilderness. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The no-wilderness recommendation is based on the following rationale: (1) the area does not possess any unique or outstanding features that are not represented in areas either already part of, or recommended for, inclusion within the National Wilderness Preservation System and (2) the area's value as wilderness is overshadowed by its value for motorized recreation, mineral development, and energy transmission.

The WSA's topography and vegetation are very similar to that found in the surrounding wilderness study areas. An abundance of areas in the general region are recommended for addition to the National Wilderness Preservation System. The study area is within 50 air miles of 14 BLM WSAs recommended for wilderness designation. There are no unique special features in this WSA. The Sacramento Mountains WSA does contain a small portion of the Sacramento/Stepladder Mountains Teddy-bear Cholla (Opuntia bigelovii) Unusual Plant Assemblage (UPA). However, the adjacent Bigelow Cholla WSA (CDCA-290) contains greater concentrations over a wider area. The Stepladder Mountains WSA (CDCA-294) to the south also contains an extensive stand of teddy bear cholla.

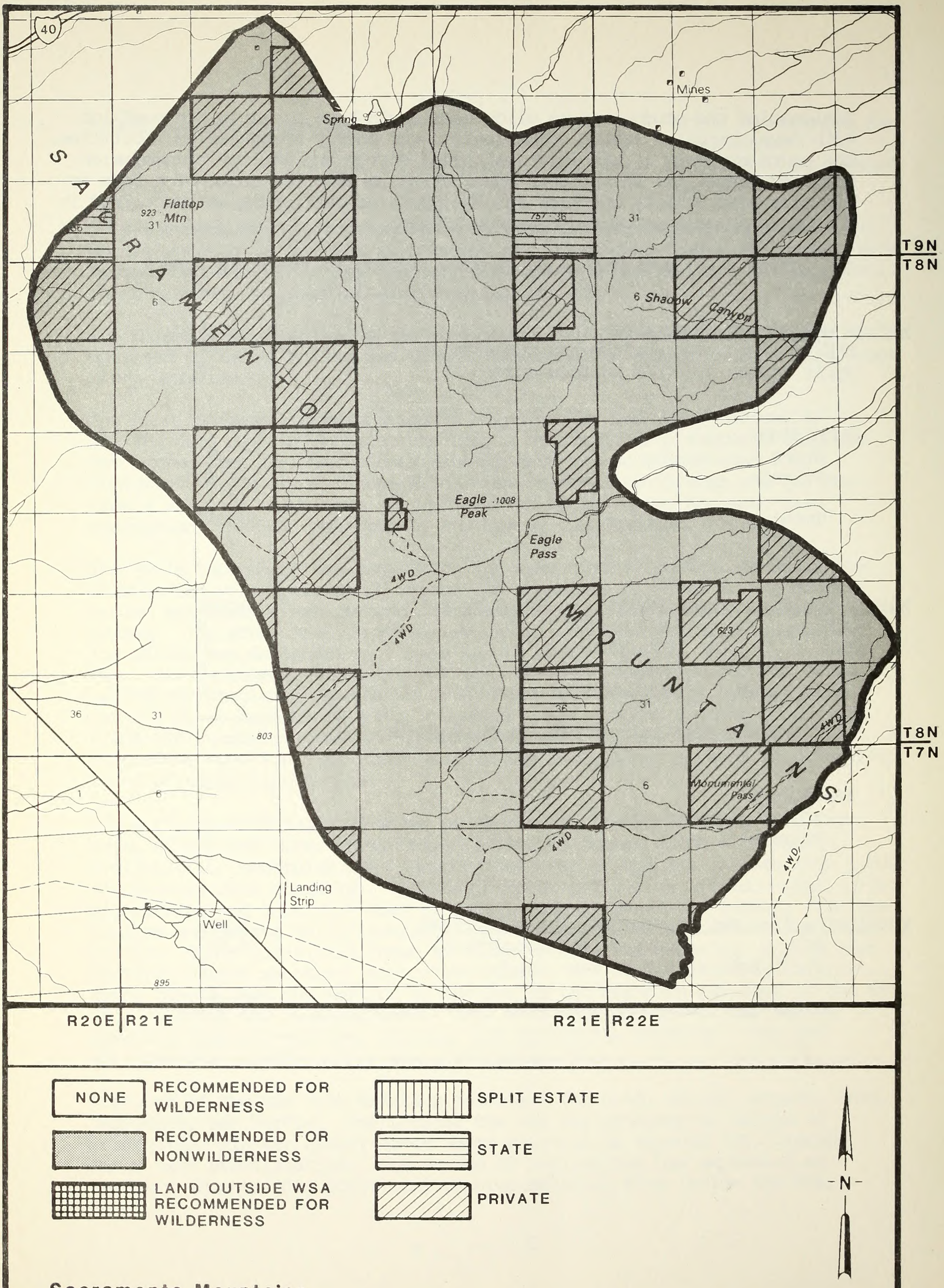
There are approximately 29 miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use. Recreational use of the WSA is less than 1,000 visitor-use days annually. The most popular activities are four-wheel drive sightseeing and touring. Most recreation use is generated locally from the Needles and Mohave Valley areas, as the WSA's proximity is ideal for day use visits. Other activities known to occur include rockhounding, upland game hunting, target shooting, and nature study. The Universities of California, among others, use the portion of the UPA in the northern extremes of the WSA as a teaching and research site. This area receives up to four visits annually from pre-college, college, and university students. The WSA attracts very little hiking and backpacking use.

Portions of the WSA have moderate potential for gold, silver, copper, lead, magnesite, and barite. Portions of the WSA are adjacent to Bureau of Reclamation rip-rap quarry sites where material is removed for Colorado River bank stabilization. The Bureau of Reclamation has expressed an interest in obtaining additional rip-rap material from inside the WSA.

Designating the study area as wilderness would have potential to conflict with development of future communication and energy transmission facilities. The south boundary is within a designated energy and utility transmission corridor identified in the CDCA Plan, which is also the route of a four to six mile wide utility corridor for the State of California as identified in the Western Regional Corridor Study (1980).

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	34,582
Split Estate	(BLM surface only)	0
Inholdings		
State		2,227
Private		12,260
Total		49,069
Within the Recommended Wilderness Boundary		**Acres**
BLM	(within WSA)	0
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		0
Inholdings		
State		0
Private		0
Within the Area Not Recommended for Wilderness		**Acres**
BLM	(surface and subsurface)	34,582
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		34,582


40
Spring
Mines
Flattop Mtn
923
31
36
S A C R A M E N T O
M O U N T A I N S
757
36
31
T9N
T8N
1
6
6 Shadow Canyon
Eagle Peak
1008
Eagle Pass
4WD
4WD
623
36
31
803
T8N
T7N
4WD
1
6
1
6
Monumental Pass
4WD
4WD
Landing Strip
Well
895
R20E
R21E
R21E
R22E
NONE
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES

Sacramento Mountains Proposal

MAP-1

CDCA-292
JUNE, 1988

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The area has been affected primarily by natural forces with man's imprint substantially unnoticeable. The only signs of man's presence are occasional mining claim markers and a loose network of old mining access routes. Most of these follow drainage courses, but may cross over intervening ridges or hills to connect with other washes. Routes located in washes are subject to flash flooding, which erases their evidence on a regular basis. Connecting routes appear to be slowly falling into an unusable condition and over time will not be noticeable to the uninformed visitor.

2. Solitude: Opportunities for solitude are available throughout the WSA. The area's irregular topography and size helps screen views and isolate visitors. Most washes are laced with ironwood, acacia, and mesquite trees, which also tend to support a feeling of solitude and isolation.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: Opportunities for hiking and nature study are enhanced by the lack of man-made intrusions and a well-developed system of washes which provide access to most of the WSA. The presence of the Bigelow cholla "garden" in the northern extreme of the WSA adds to the importance of the area for educational purposes.

4. Special Features: The Sacramento Mountains WSA is a large portion of the range for the Sacramento Mountains desert bighorn sheep herd which numbers approximately 60 animals. Several key water sources exist in the Sacramento Mountain range, two of which have been developed into big-game guzzlers primarily for desert bighorn sheep. A small area of alluvial fan on the WSA's southwestern and western margin supports a desert tortoise population of up to 50 individuals per square mile. Both the desert tortoise and the desert bighorn sheep are BLM sensitive species in California. The desert tortoise is also under status review by the U.S. Fish and Wildlife Service for possible Federal listing as a threatened species.

   The Sacramento Mountains WSA affords good nesting and foraging habitat for raptors such as red-tailed hawks, prairie falcons, kestrels, golden eagles, and several species of owls. Known aeries exist in the mountain range.

The Sacramento Mountains contain an unusually dense stand of teddy bear cholla cactus (Opuntia bigelovii) (also known as Bigelow cholla) along north and west facing slopes at mid to upper elevations. It is a portion of a designated unusual plant assemblage.

Native American use of the study area continued into historic times and is maintained today. Some water sources, mountain peaks, and petroglyphs are considered sacred by modern Native Americans. Both Chemehuevi and Mohave groups conduct seasonal religious and ritual pilgrimages into the Sacramento Mountains.

B. Diversity in the National Wilderness Preservation System (NWPS)

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 34,582 acres of the American Desert/Creosote Bush ecosystem. It is currently represented within the NWPS in Joshua Tree National Monument and within several of the WSAs proposed for wilderness designation in the CDCA.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas		Other BLM Studies	
	areas	acres	areas	acres
	NATIONWIDE			
American Desert/Creosote Bush	1	343,753	117	4,233,327
	CALIFORNIA			
American Desert/Creosote Bush	1	343,753	88	3,619,523

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of six major population centers. Table 3 summarizes the number and acreage of wilderness areas and other BLM study areas within a five-hour drive of these population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas		Other BLM Studies	
	areas	acres	areas	acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Bakersfield	32	4,071,358	128	3,998,548
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Riverside-San Bernardino	22	2,031,054	205	7,658,649
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The closest designated area is the Joshua Tree Wilderness in Joshua Tree National Monument, approximately 70 air miles southwest. Within 50 air miles of the Sacramento Mountains WSA are 14 BLM study areas recommended for wilderness designation, seven in the California Desert District, five in Arizona's Phoenix District, and two in Arizona's Yuma District.

C. Manageability

The Sacramento Mountains WSA is manageable as wilderness. Access to the area is limited to a few established vehicle routes including the gas pipeline maintenance road on the north, Eagle Pass near the center, and Monument Pass along the southern boundary. Each of these routes could be signed and/or blocked. The WSA's proximity to the city of Needles does complicate management as local residents have enjoyed a long history of commercial and recreation use of the area. Long-term use patterns may be difficult to change. Management of wilderness would thus require a significant field presence, particularly at first, to ensure the integrity of the area.

Presently, two guzzlers for desert bighorn sheep are located within the WSA. Maintenance of these guzzlers is required approximately two times per year. Maintenance activities normally require mechanized equipment and vehicle access for transportation of materials to the site.

Designating the study area as wilderness has potential to conflict with development of future communication and energy transmission facilities. The south boundary is within a utility corridor identified both in the

CDCA Plan and the Western Regional Corridor Study (1980). This corridor has not reached its development capacity although many of the other 16 utility corridors identified in the CDCA Plan are nearing capacity. Wilderness designation of the Sacramento Mountains WSA could prohibit full development of the corridor, forcing installation of new energy transmission lines in other corridors or in areas not previously disturbed.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Sacramento Mountains WSA is located in the BLM Sacramento Mountains Geology-Energy-Minerals (G-E-M) Resource Area (GRA). The G-E-M analysis in the CDCA Plan EIS for this WSA was not complete and had not been fully examined and analyzed, integrated, and interpreted at the time the wilderness recommendation was made. However, it did indicate that this WSA had a potential for metals (manganese and copper) magnesite, barite, fluorite, and common mineral materials such as sand, gravel and decorative rock. There was no stated potential for the occurrence of leasable commodities, including oil, gas, sodium, or potassium. As of December, 1979, there were no claims recorded with the BLM within the Sacramento Mountains WSA.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Recommendation: No U.S. Geological Survey or Bureau of Mines mineral surveys were conducted in this WSA because it is recommended nonsuitable for wilderness designation. However, the California Division of Mines and Geology (CDMG) published an open file report in 1985 that assessed the mineral potential of this WSA (OFR 85-18 SAC). The CDMG report supported the 1980 EIS but provided more detailed information on the mineral potential within the WSA. The mineral potential classifications shown on Map 2 are based on this CDMG report using the BLM mineral occurrence classification scheme.

   The CDMG report indicated that the most widespread area for gold-copper deposits was within and adjacent to the northeast part of the WSA, known as the Copper Gulch area. Approximately 60 tons of copper-gold ore was mined from Copper Gulch, although most of this production came from outside the WSA. CDMG identified a mineralized area surrounding the Cherokee Mine along the southeastern border of this WSA showing a moderate occurrence potential for gold, silver and copper. The Cherokee Mine lies about 2,000 feet outside the WSA boundary. The mineralized fracture system of the Cherokee area extends into the WSA and was extensively drilled in 1983 and 1984 by a major mining company and assay values ranged from 0.005 to 0.57 ounces per ton of gold with over $500,000 of ore reserve. No production records were available. The report indicated a moderate occurrence potential for gold, silver, copper and barite in the northern most portion of the WSA.

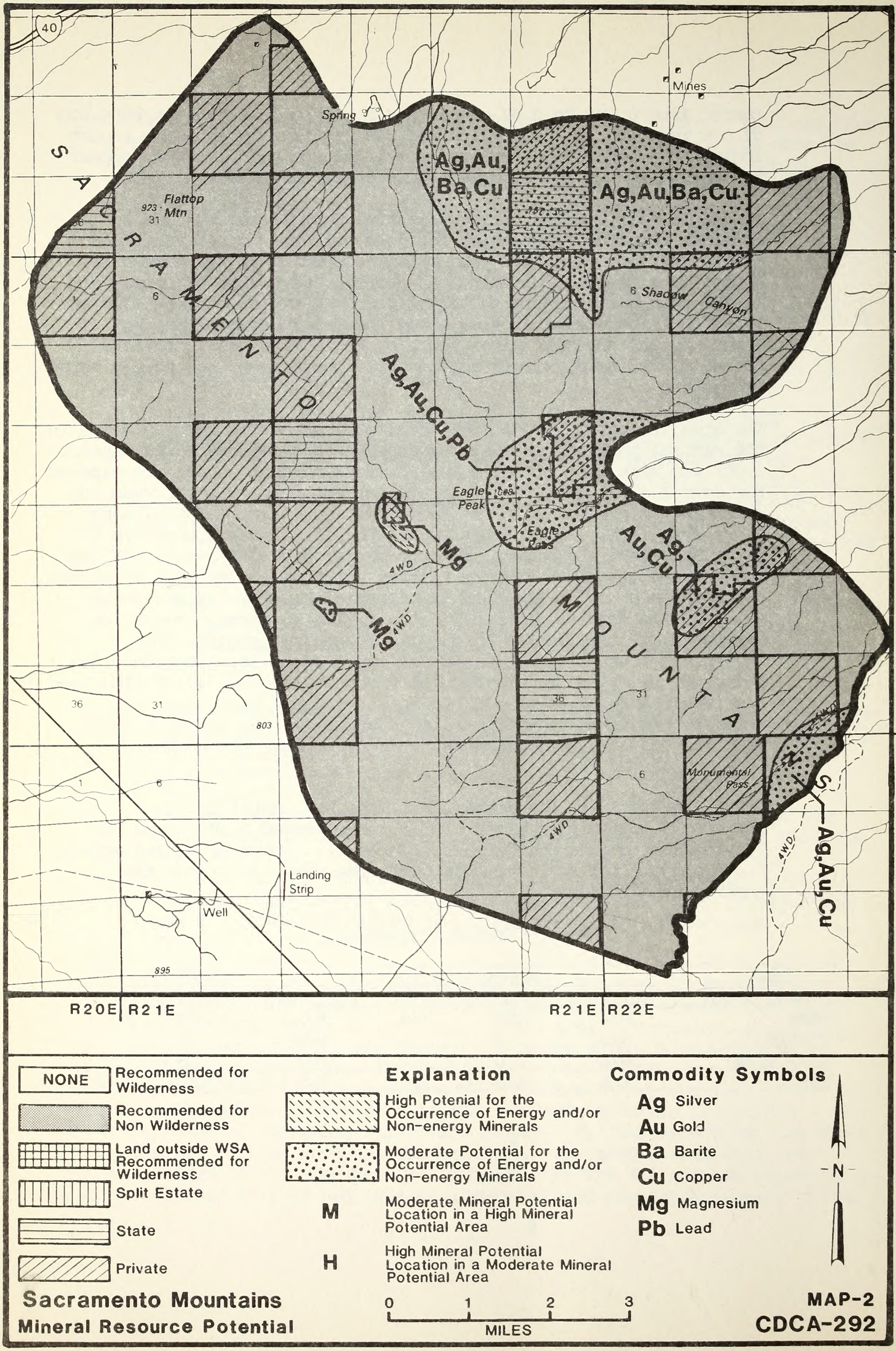
The Eagle Pass area in the east-central part of the WSA has a moderate occurrence potential for gold, silver, copper, and lead mineralization. The main production (according to the Bureau of Mines) from the Big Four Mine was about 3,302 pounds of copper and 15,306 pounds of lead, with very minor gold and silver, in 1915 and 1916. An elongated area also along the east border of the WSA about one and one-half miles south of Eagle Pass has a moderate potential for gold, silver and copper. There is no recorded mineral production.

The area indicated with a high occurrence potential for magnesite in the central part of the WSA surrounds the Needles magnesite deposit about one mile west of Eagle Peak. These magnesite beds are exposed for over 2,400 linear feet. An evaluation of the mineral resource potential is presented in the Sacramento Mountains G-E-M file by S. Hagerty (BLM, 1982). This report, based mainly on overlays by Terradata, Inc. and mineral reports prepared by geologists for the Southern Pacific Land Company, listed numerous occurrences of metals and nonmetals within the WSA. Substantial reserves of magnesite exist at the Needles magnesite deposit with 78 percent magnesium carbonate. Vitaliano (1950, Needles magnesite deposit, CDMG, California Journal of Mines and Geology, Volume 46) determined the indicated reserves for the Needles magnesite deposit at 117,000 tons and inferred reserves at 410,000 tons. Another small area of moderate occurrence for magnesite is about one and one-half miles southwest of the Needles magnesite area and near the southwest boundary of the WSA.

As of January 1988, BLM records show the WSA contained 129 unpatented lode mining claims, which encompassed 2,580 acres, or 7.1% of the total study area (see Table 4). About 92 (1,840 acres) are along the northern boundary, with the remainder along the southeastern boundary.

Table 4 - Mineral Interest

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	N/A	129	129	N/A	2,580	2,580
Placer	N/A	0	0	N/A	0	0
Mill Site	N/A	0	0	N/A	0	0
Total	N/A	129	129	N/A	2,580	2,580


40
Mines
Spring
SACRAMENTO MOUNTAINS
Flattop Mtn
923
31
36
1
6
Ag,Au,Ba,Cu
Ag,Au,Ba,Cu
T9N
T8N
6 Shadow Canyon
Ag,Au,Cu,Pb
Eagle Peak
Eagle Pass
Mg
Mg
4WD
Ag, Au,Cu
36
31
803
T8N
T7N
Monumental Pass
Ag,Au,Cu
Landing Strip
Well
895
R20E
R21E
R21E
R22E
NONE
Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potential for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
Ag Silver
Au Gold
Ba Barite
Cu Copper
Mg Magnesium
Pb Lead
N
0
1
2
3
MILES

Sacramento Mountains
Mineral Resource Potential

MAP-2
CDCA-292

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Wilderness values will decline over the long-term as exploration and development occurs in areas of moderate mineral potential, and in areas used for off-highway vehicle (OHV) recreation. Wilderness values will be retained in the portions of the WSA not subjected to these two uses.

2. Impact on Locatable Mineral Exploration and Development: The proposed action will have no impact. Further exploration, as well as development of the 129 existing claims, can proceed subject to regulations stated in 43 CFR 3809 and guidelines defined in the CDCA Plan.

3. Impact on Bureau of Reclamation Colorado River Project: BLM will consider requests by the Bureau of Reclamation to remove rip-rap from portions of the WSA, an action which was previously precluded by the Interim Management Policy for Lands under Wilderness Review.

4. Impact on the Sacramento/Stepladder Mountains Teddy-bear Cholla Unusual Plant Assemblage: The majority of this UPA is outside the Sacramento Mountains WSA. The UPA will continue to be managed according to the guidelines provided for this resource in the CDCA Plan.

5. Impact on Sensitive Wildlife Species: Future planned actions will be subject to environmental analysis to identify any potential impacts to desert tortoise or bighorn sheep, allowing development and implementation of appropriate mitigation measures.

6. Impact on Native American Uses and Values: Native American access to traditional religious sites will be retained. Some sacred features such as mountain peaks or water sources will be subject to administrative protection under the American Indian Religious Freedom Act. Any changes in physical appearance or use will be made with the concurrence of the affected Native American group.

7. Impact on Archeological Resources: All proposed surface disturbing activities will be subjected to environmental analysis to allow the detection and salvage of any resources.

8. Impact on Regional Energy Transmission: The proposed action will allow full development of existing energy and communication transmission corridors, consistent with CDCA Plan guidelines.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Known inaccuracies are noted in parentheses.

1. Inventory Phase: Comments indicate that the mining in the northeastern Sacramento Mountains is substantially unnoticeable; numerous ways occur along the eastern bajada. The area provides outstanding opportunities for solitude and primitive recreation.

2. Study Phase: Of the 18 comments received on this WSA, 11 favored multiple use management for this unit, while seven preferred wilderness designation. Southern California Gas Company was concerned over their plans to build a 30-inch pipeline between compression stations near Topock and Needles; the pipeline would form the southeastern border of the WSA. The company suggested changing the boundary to exclude the pipeline as well as transmission facilities. Southern California Edison Company also expressed concern about gas pipelines. Texaco Corporation stated that the area has potential for oil, gas, and geothermal resources and should be available for subsurface entry. Santa Fe Railroad expressed a need for access into the WSA for drainage surveys, flash flood control, etc. A landowner was concerned about maintaining access to some landlocked property. The City Council of the City of Needles also expressed a need for access for flood control purposes. Mineralization of the area was noted by one respondent; gold, silver, copper, and magnesite were said to be present. Factors said to detract from wilderness quality included mining facilities to the northeast; dwellings, a railroad, an airfield, radio towers, and OHV activity.

   Supporters of wilderness designation felt that the area met the 2(c) qualifications and that the eastern portion of the Sacramento Mountains should be added. They stated that mining activities could be screened by the area's diverse topography and that the bajada area should be included. High scenic quality and the teddy bear cholla were specifically noted.

   Nineteen letters were received in response to the Public Input Workbook. Sixteen wanted the area expanded on the north and east. Cultural resources, vegetation, and generally high quality wilderness values were given as the rationale. Two respondents mentioned keeping the area open for mineral development and for prospecting and rockhounding. The University of California's natural land and water reserves system representative spoke of the Reserve of Bigelow Cholla cactus in T. 9 N., R. 20 E., section 21, and requested its careful consideration by BLM managers.

3. Draft Plan Alternatives: There were few comments specific to this WSA in response to the Draft Plan Alternatives. However, this WSA was one of those opposed by the National Outdoor Coalition, a coalition of mining, rockhounding, and off-highway vehicle organizations. A large number of club members sent in printed coupons supporting a multiple use classification of moderate use for this area. This was not in agreement with any of the four alternatives. Conservation-oriented organizations approved the Protection Alternative which recommended wilderness designation for this unit.

4. Proposed Plan: Conservation organizations and vehicle-oriented recreation and mining groups maintained the same positions stated for the Draft Plan Alternatives.

   No comments were received from local governments.

Stepladder Mountains

CDCA 294

STEPLADDER MOUNTAINS WILDERNESS STUDY AREA (WSA)

(CDCA-294)

1. THE STUDY AREA --- 153,395 acres

The Stepladder Mountains WSA is located in San Bernardino County in the eastern portion of the California Desert Conservation Area (CDCA). The nearest cities are Needles, California, 25 road miles northeast; Parker, Arizona, 35 road miles southeast; and Lake Havasu City, Arizona, 55 road miles east. The study area contains 125,754 acres of public land under the jurisdiction of the Bureau of Land Management (BLM), 6,448 acres of State land, and private inholdings totalling 21,193 acres (see Map 1 and Table 1).

The north WSA boundary is a gas/telephone utility line maintenance road. The southeastern boundary is a utility transmission line right-of-way. The southern boundary is a combination of a county-maintained road and a maintained mining claim access road. The west boundary is a utility transmission line right-of-way. All of the WSA boundaries are easily accessible by two-wheel drive vehicles. The northern and western boundaries are within energy and utility transmission corridors identified by BLM in the CDCA Plan, and also by the Western Regional Corridor Study. Portions of the northeastern boundary are also within a corridor identified in the CDCA Plan and identified as a planned future corridor in the Western Regional Corridor Study.

In the center of the WSA is the Stepladder Mountains, a bleak, relatively low, elongated mountain range extending about ten miles in a north-south direction and comprising approximately 15% of the WSA. The remaining 85% of the WSA consists of flat bajadas dominated by creosote bush scrub. Two Unusual Plant Assemblages (UPAs) are within the WSA: a small stand of crucifixion thorn, and a large, dense stand of Bigelow cholla, covering about 45 square miles in the northern portion of the WSA and extending well beyond the boundaries.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EIS) for the CDCA Plan: protection, use, balanced, and no action; a summary of the area's wilderness values was included in Appendix III of the Final EIS. Two different suitability recommendations were analyzed in the EISs: no wilderness and partial wilderness (90% suitable).

2. RECOMMENDATION AND RATIONALE ---

0	acres recommended for wilderness
125,754	BLM acres recommended for nonwilderness

No wilderness is the recommendation for the Stepladder Mountains WSA. The entire acreage in this WSA is released for uses other than wilderness. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The no-wilderness recommendation is based on the following rationale: (1) the landforms and ecosystem of this WSA are already well represented in other areas identified for wilderness preservation; (2) the area's value as wilderness is overshadowed by its potential for motorized recreation, mining, and oil and gas exploration and production; (3) the area's special features can be protected without wilderness designation, under existing management guidelines; and (4) wilderness designation has the potential to conflict with future energy transmission needs.

The WSA is typical of the desert environments within the transition zone between the Sonoran and Mojave Deserts. A more extensive and diverse representation of the region's ecologic and geographic features is found within other CDCA study areas recommended for wilderness designation, including the Turtle Mountains (CDCA-307) and Chemehuevi Mountains (CDCA-310) WSAs, located a mere 20 miles from the Stepladder Mountains WSA.

There are approximately 58 miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use. Current recreation use within the Stepladder Mountains WSA is almost exclusively motorized, and would therefore be displaced by wilderness designation. Use is estimated at 500 visitor-use days annually, and the predominant activity is rockhounding, which primarily takes place in the southern portion of the WSA. Hunting and trapping also occur.

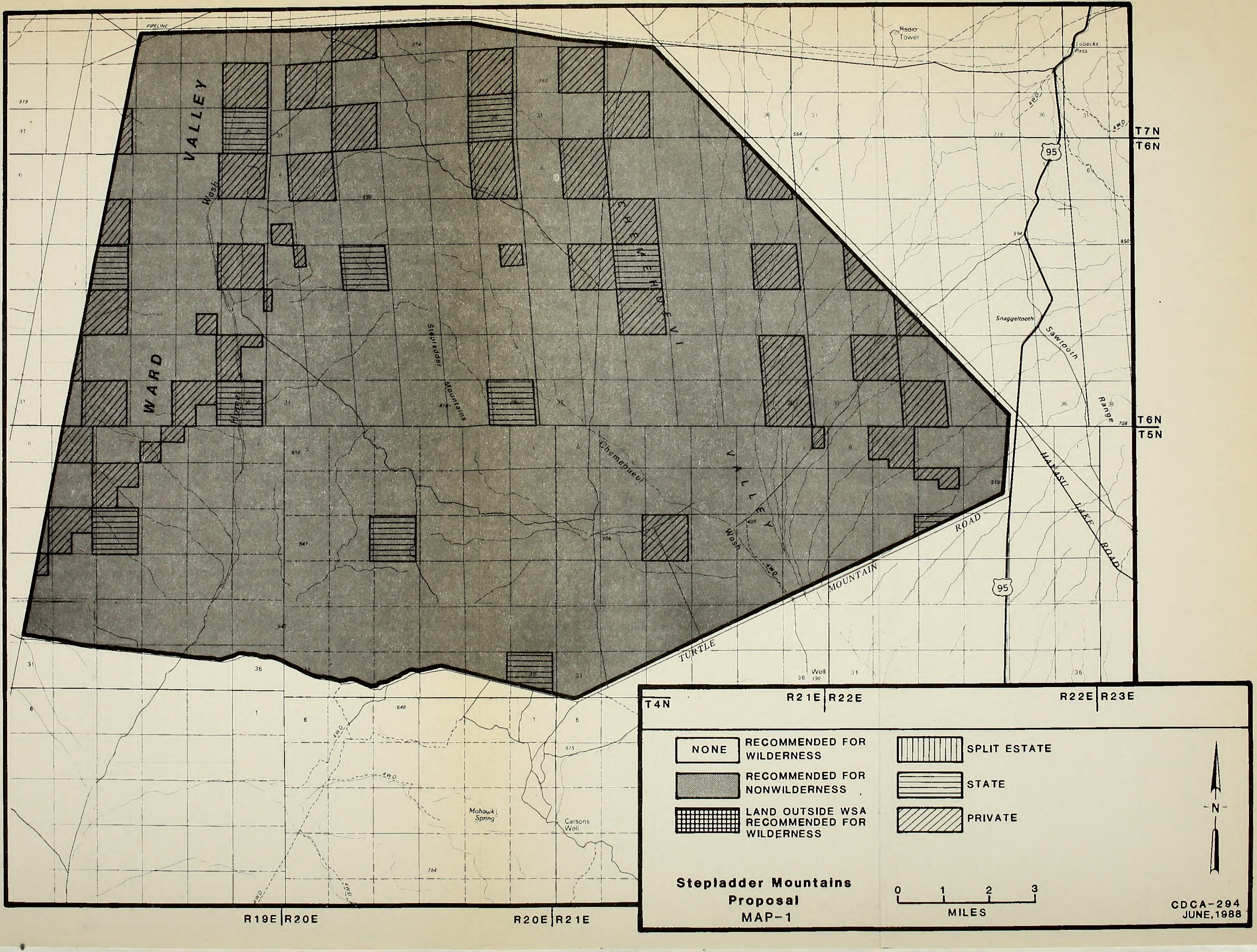
Portions of the WSA have moderate potential for gold, silver, and copper. Other areas within the WSA have moderate oil and gas potential. Wilderness designation would conflict with full development of these potential resources, since the area would be withdrawn from mineral entry and leasing. Conversely, since valid existing mining claims could be developed, this activity would conflict with maintenance of wilderness values.

The features of major significance in this WSA are the two areas classified by the CDCA Plan as Unusual Plant Assemblages, and high quality desert tortoise habitat. Both UPAs and the desert tortoise habitat are within the boundaries of the Fenner/Chemehuevi Valley Habitat Management Area, for which a habitat management plan (HMP) will be prepared. The HMP will provide protective measures for these sensitive biological features in a framework of multiple use management.

The north and west boundaries of the WSA are within energy and utility transmission corridors designated by both the CDCA Plan and the 1980 Western Regional Corridor Study. Portions of the east boundary are within a corridor established by the CDCA Plan and identified as a planned future corridor by the Western Regional Corridor Study. Wilderness designation could constrain the placement of future facilities within these three corridors.

TABLE 1 - Land Status and Acreage Summary of the Study Area

		Acres
Within Wilderness Study Area		
BLM	(surface and subsurface)	125,754
Split Estate	(BLM surface only)	0
Inholdings		
State		6,448
Private		21,193
Total		153,395
Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	0
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		0
Inholdings		
State		0
Private		0
Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	125,754
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		125,754



Stepladder Mountains Proposal

MAP-1

CDCA-294
JUNE, 1988

PIPELINE
Radio Tower
Lobecks Pass
WARD VALLEY
Wash
Homer
CHEMEHUEVI
Stepladder Mountains
Chemehuevi
VALLEY
Wash
4WD
Snaggeltooth
Sawtooth Range
HAVASU LAKE ROAD
TURTLE MOUNTAIN ROAD
95
Well
Mohawk Spring
Carsons Well
T7N
T6N
T5N
T4N
R19E R20E
R20E R21E
R21E R22E
R22E R23E
NONE RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0 1 2 3
MILES

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The WSA is essentially untrammeled by man. The only signs of man's presence are occasional mining claim markers and one abandoned water tank located in the southeastern corner of the WSA. All are substantially unnoticeable when considered in the context of the WSA as a whole.

2. Solitude: Opportunities for solitude are present throughout the WSA. The densely vegetated bajadas, rolling hills, and washes tend to screen the minimal amount of users from one another. Very little vehicular traffic is present along the boundaries which also enhances the feeling of solitude.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: Opportunities for hiking, backpacking, and nature study abound because of the large spaces involved, the dissected topography in the highlands, natural vegetative screening and the lack of any noticeable man-made impacts.

4. Special Features: A small stand of crucifixion thorn (*Holacantha emoryi*) occurs along Homer Wash in the northwest corner of the WSA. Although crucifixion thorn is common in southwest Arizona, it reaches the limit of its distribution in the California deserts and is therefore classified as an unusual plant assemblage. The other UPA in the WSA is a very dense stand of teddy bear cholla (*Opuntia bigelovii*) covering approximately 45 square miles in the northern portion of the WSA. No BLM sensitive plant species, and no Federal- or State-listed rare, threatened, or endangered plant species are known to occur in this WSA.

   The WSA's bajadas and larger washes provide good habitat for the desert tortoise, with densities up to 100 per square mile. The desert tortoise is a BLM sensitive species and is under status review by the U.S. Fish and Wildlife Service for listing as a threatened species. The desert bighorn sheep is also a BLM sensitive species and occasionally occurs in the WSA, but on a transient basis. No permanent water sources are known to exist in the Stepladder Mountains. The Stepladder Mountains WSA contains no other BLM sensitive wildlife species. No Federal- or State-listed rare, threatened, or endangered wildlife species are known to occur in this WSA.

To date, only 480 acres within the WSA have been surveyed for cultural resources, but the central portion of the study area is considered highly sensitive. Caves used as shelters occur in association with numerous petroglyphs, and a network of trails radiate from these prehistoric occupation areas. This area was used by Chemehuevi, Mohave and Panamint Shoshone peoples. Numerous temporary camps are anticipated to exist between the Ward and Chemehuevi valleys, as bighorn sheep ranged in the mountainous areas during prehistoric times. These areas are still used by Chemehuevi Indians for seasonal collecting and hunting. Isolated projectile points occur in this WSA. Located in the southern portion of the study area is an extensive lithic scatter. It is predicted that a Chemehuevi village related to bighorn sheep and deer hunting in the nearby Turtle Mountains may be based in this area. Known cultural resources in this WSA have been incorporated into the North Turtle Mountain Archaeological District. This District has been determined to be ineligible for listing on the National Register of Historic Places.

Portions of the study area were part of the Desert Training Center, used for military maneuvers in the early 1940s. These old abandoned camps now carry historic significance for World War II history buffs. The potential for spent or live ordnance still exists. These materials are considered public property, but are highly sought after as memorabilia and can be extremely hazardous.

B. Diversity in the National Wilderness Preservation System (NWPS)

1. Assessing the diversity of natural systems and features as represented by ecosystems: The WSA contains 125,754 acres of the American Desert/Creosote Bush-Bur sage ecosystem. This ecosystem is currently represented within the NWPS.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas		Other BLM Studies	
	areas	acres	areas	acres
NATIONWIDE				
American Desert/Creosote Bush-Bur Sage	3	126,033	48	1,446,311
CALIFORNIA				
American Desert/Creosote Bush-Bur Sage	2	26,427	20	815,850

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of five major population centers. Table 3 summarizes the number and acreage of wilderness areas and other BLM study areas within a five-hour drive of these population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas areas	NWPS areas acres	Other BLM Studies areas	Other BLM Studies acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Riverside-San Bernardino	22	2,031,054	205	7,658,649
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The closest designated area is Joshua Tree Wilderness at Joshua Tree National Monument, approximately 50 air miles southwest. Nine BLM WSAs recommended for wilderness designation are within 50 air miles, seven in the California Desert District and two in Arizona's Phoenix District.

C. Manageability

The Stepladder Mountains WSA is manageable as wilderness. However, because many of the area's 52 mining claims are within the zone predicted to have moderate potential for gold, silver, and copper, it is likely that at least a portion of the claims would withstand a validity examination. Unless the United States can acquire the valid mineral rights, those claims could be developed, which could degrade wilderness values.

Maintenance of wilderness values is also at risk because 20% of this WSA is in non-Federal ownership. Unless all or most of these inholdings can be acquired, it will be impossible to assure that uses incompatible with wilderness management will not occur.

Designating the study area as wilderness has potential to conflict with development of future communication and energy transmission facilities. The north and west boundaries are within energy transmission corridors designated by the CDCA Plan, which are also delineated as four to six mile wide utility corridors by the 1980 Western Regional Corridor Study. The east boundary is partially within a corridor designated by the CDCA Plan, and identified as a planned future corridor by the Western Regional Corridor Study. Wilderness designation of the Stepladder Mountains WSA could prohibit full development of the three corridors, forcing installation of new energy transmission lines in other corridors or in areas not previously disturbed.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Stepladder Mountains WSA is within the BLM Stepladder Geology-Energy-Mineral (G-E-M) Resource Area (GRA), and a small southern portion of the WSA is in the Turtle Mountain GRA. In 1980, an unclassified potential was assigned for metallic minerals, uranium, and oil and gas. In December 1979, there were over 100 unpatented mining claims in the WSA.

   Sediments on the west and east sides of the WSA are in a potential geologic structure classified by the U.S. Geological Survey (USGS) in 1978, and assigned a moderate potential for the occurrence of oil and gas under the BLM classification system. Map 2 reflects the mineral resource potential of the WSA.

   Several abandoned gold mines are located just outside the northern boundary of the WSA. In the southern portion that lies within the Turtle Mountain GRA there is an unknown mine shown on the 1963 California Division of Mines and Geology Needles geologic map sheet. These areas were classified in the 1980 GRA as having a moderate potential for the occurrence of gold, silver, lead, zinc, tungsten, and copper based on similar geology to precious and base metal mines adjacent to the WSA in the Old Woman and Turtle mountains.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Recommendation: No U.S. Bureau of Mines or USGS mineral surveys were performed within this WSA because it is recommended nonsuitable for wilderness designation.

   Unpatented placer and lode mining claims are concentrated in the southwestern and south-central portions of the WSA. The following table summarizes the unpatented mining claims located within the WSA and recorded with BLM as of December 1987.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	N/A	24	24	N/A	480	480
Placer	N/A	28	28	N/A	1,120	1,120
Mill Site	N/A	0	0	N/A	0	0
Total	N/A	52	52	N/A	1,600	1,600

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Wilderness values will decline over the long-term as exploration and development occurs in areas of moderate mineral and oil and gas potential, and in areas used for off-highway vehicle (OHV) recreation. Wilderness values will be retained in the portions of the WSA not subjected to these uses.

2. Impact on Locatable Mineral Exploration and Development: The proposed action will have no impact. Further exploration, as well as development of the 52 existing claims, can proceed subject to guidelines contained in the CDCA Plan.

3. Impact on Sensitive Wildlife Species: Future planned actions will be subject to environmental analysis to identify any potential impacts to desert tortoise or bighorn sheep, allowing development and implementation of appropriate mitigation measures.

4. Impact on Unusual Plant Assemblages: UPAs will continue to be managed in accordance with the CDCA Plan, requiring special consideration in environmental analyses to avoid or minimize impacts, and development of rehabilitation measures where impacts are unavoidable.

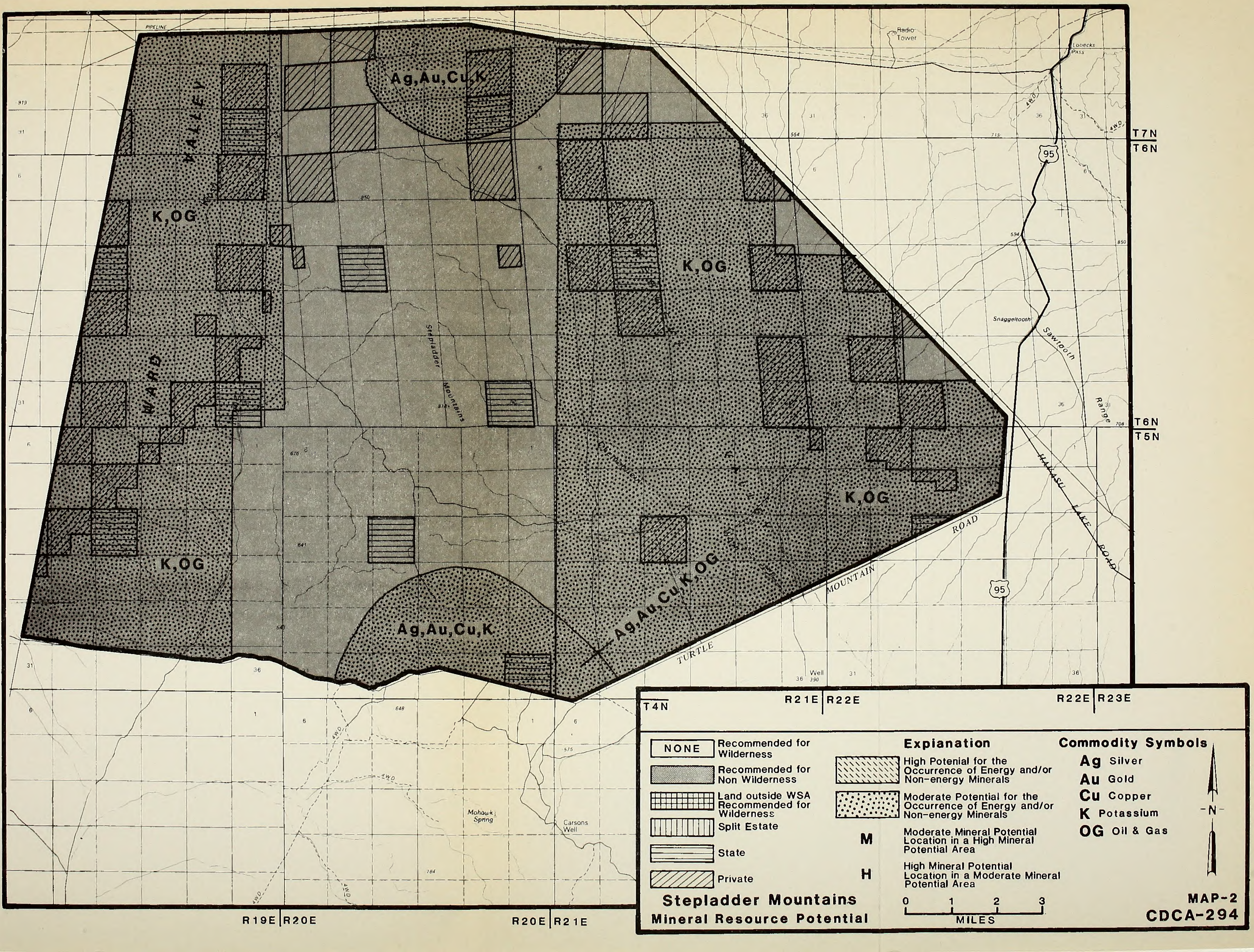
5. Impact on Native American Uses and Values: Native American access to traditional hunting areas and collection sites will be retained.

6. Impact on Archeological Resources: All proposed surface-disturbing activities will be subjected to environmental analysis to allow the detection and salvage of any resources.

7. Impact on Regional Energy Transmission: The proposed action will allow full development of existing energy and communication transmission corridors, consistent with CDCA Plan guidelines.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.


PIPELINE
Radio Tower
Lobecks Pass
Ag,Au,Cu,K
VALLEY
WARD
K,OG
K,OG
K,OG
K,OG
Stepladder Mountains
Ag,Au,Cu,K
Ag,Au,Cu,K,OG
TURTLE MOUNTAIN ROAD
HAVASU LAKE ROAD
Snaggletooth
Sawtooth Range
95
95
4WD
Mohawk Spring
Carsons Well
Well
T7N
T6N
T6N
T5N
T4N
R19E R20E
R20E R21E
R21E R22E
R22E R23E
NONE Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
Ag Silver
Au Gold
Cu Copper
K Potassium
OG Oil & Gas
N
0 1 2 3
MILES
Stepladder Mountains
Mineral Resource Potential
MAP-2
CDCA-294

G. Summary of WSA-Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Known inaccuracies are noted in parentheses.

1. Inventory Phase: Comments stated that the area meets the 2(c) wilderness criteria, with outstanding opportunities for solitude and primitive and unconfined recreation.

2. Study Phase: Of the 14 comments received on this WSA, 11 favored continued multiple use management of the area, two preferred wilderness designation, and one recommended wilderness for those portions of the WSA which had not been used for military training in World War II or for the desert strike maneuvers in 1964.

   Many conditions which detract from wilderness quality were said to be present. These included powerlines, roads, mining operations, fences, pipelines, past military use, structures, highway noise, and scars from off-highway vehicle use. Grazing was said to occupy 2,562 acres. Rockhounds asked for vehicular access to this favorite spot, while another respondent wanted access for recreation and mineral exploration. An oil company feared that wilderness designation would preclude exploration for potential sources of oil, gas, and geothermal resources. One respondent claimed that the area contains less than 5,000 acres of public land and should therefore be dropped from wilderness consideration.

   Wilderness designation was urged by those who want protection of scientific, educational, ecological, and geological values in the area. Among features cited were fine creosote flats, and the upper reaches of Sacramento Wash.

   Two comments were received in response to the Public Input Workbook of 3/15/79. One wanted the area kept open for the enjoyment of rockhounds, photographers, and other hobbyists, and recreationists. The second respondent asked that the eastern boundary be moved away from Highway 95 and the western boundary away from the transmission lines.

3. Draft Plan Alternatives: There were few comments specific to this WSA in response to the Draft Plan Alternatives. However, this WSA was one of those opposed by the National Outdoor Coalition (NOC), a coalition of mining, rockhounding, and off-highway vehicle organizations. A large number of club members sent in printed coupons supporting a multiple use classification of moderate use for this area. This was in agreement with the Use Alternative.

Conservation-oriented individuals were mostly in agreement with the Protection Alternative which recommended wilderness designation for this unit. Some wanted even more wilderness than that stated in the Protection Alternative.

4. Proposed Plan: The plan recommended a limited use classification for this WSA, so was not approved by either the vehicle oriented or the conservation-oriented groups. Positions of these two types of respondents remained the same as for the Draft Plan Alternatives.

No comments were received from local governments.

Pilot Peak

CDCA 295

PILOT PEAK WILDERNESS STUDY AREA (WSA)

(CDCA-295)

1. THE STUDY AREA --- 42,942 acres

The Pilot Peak WSA is located in San Bernardino County in the southeastern portion of the California Desert Conservation Area (CDCA). The nearest communities are Needles, California, 35 road miles northeast; Parker, Arizona, 65 road miles southeast; and Lake Havasu City, Arizona, 95 road miles east. The WSA includes 30,526 acres of public lands managed by the Bureau of Land Management (BLM), 1,919 acres of lands belonging to the State of California and private inholdings totaling approximately 10,497 acres. No split-estate lands exist within the WSA boundaries (see Map 1 and Table 1).

The WSA is bordered on the north by a gas pipeline right-of-way and associated maintenance road, on the east by a powerline right-of-way, and on the southwest by Sunflower Springs Road. The west boundary is composed of gravel roads and section lines. A two mile road that intrudes from the west boundary is cherrystemmed from the WSA. Approximately 28% of the WSA is composed of non-public land laid out in north-south oriented strips in a reoccurring but uneven pattern. There is a small public water reserve in the east-central portion of the area. Approximately 16 sections located in the northern portion of the study area have been contaminated by unexploded military ordnance, a remnant of World War II training maneuvers.

The public land acres within the WSA contain landforms consisting of 50% alluvial fans, 25% hills, 20% pediments and five percent dissected fans. The bleak Little Piute Mountains are the dominant visual landform within the study area. In the extreme southern corner are three uplifted rises, the dominant one being Pilot Peak. The bajadas are cut from east to west by four large washes. West from the Little Piute Mountains is a large, gently sloping valley and the last vestiges of the Old Woman Mountains.

Vegetation within the WSA is transitional from the lower Colorado Desert to the Mojave Desert, resulting in a relatively mundane vegetative cover. Creosote bush scrub and desert dry wash are the major vegetation associations of this WSA. The creosote bush scrub is dominated by creosote bush with a sparse understory of white bur sage, brittlebush and other small shrubs with an occasional Mojave yucca to break up the monotony. In the northwestern portion of the WSA, the understory is more diverse with desert buckwheat, California joint-fir, desert cassia, silver cholla, pencil cholla, and Big galleta grass occurring with white bur sage and brittlebrush. Mojave yucca occurs more readily within this northwestern portion. No unusual plant assemblages occur in the WSA. No BLM sensitive plant species or Federal/State-listed rare, threatened and/or endangered plant species are known to occur.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EIS) for the CDCA Plan: protection, use, balanced, and no action; a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

0	acres recommended for wilderness
30,526	BLM acres recommended for nonwilderness

No wilderness is the recommendation for this WSA. The entire acreage in this WSA is released for uses other than wilderness. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts. The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The nonsuitable recommendation is based on the following rationale: (1) the area's value as wilderness is overshadowed by its potential for motorized recreation and mining; (2) the extensive amount of private lands would encumber management of the area as wilderness; (3) wilderness designation has the potential to conflict with future energy and transmission needs; and (4) the area's special features can be protected without wilderness designation, under existing management guidelines.

The addition of the Pilot Peak WSA to the National Wilderness Preservation System (NWPS) would not add to the diversity or uniqueness of the system, nor would it add significantly to the wilderness recreation opportunities available in the region. These factors, combined with the fact that this WSA has only marginal wilderness values, led to the nonwilderness recommendation.

The Pilot Peak WSA, while natural in character, contains no unusual features or resources, and is merely an area of undeveloped public land. It is ecologically similar to other areas identified for wilderness preservation. Within 50 air miles are 12 other BLM study areas recommended for addition to the National Wilderness Preservation System. Many of these 12 areas display the same ecosystem and landforms as this WSA, and also contain notable special features of scientific and general sightseeing interest. Three nearby WSAs, Granite Mountains WSA (CDCA-256), 25 air miles northwest; Fort Piute WSA (CDCA-267), 20 air miles north; and the Turtle Mountains WSA (CDCA-307), ten air miles east contain a combined total of over 100,000 acres which BLM is recommending for wilderness designation. All are mountainous, and all contain a more diverse representation of the same type of ecosystem found in the Pilot Peak WSA.

There are approximately 18 miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use. The Pilot Peak WSA currently receives approximately 500 visitor-use days annually. Most use occurs in the form of rockhounding within the Little Piute Mountains as two upland valleys afford rockhounders the opportunity to search for Vaughn marble, onyx, orbicular jasper and other gemstones. Demand for primitive recreational opportunities in the study area are virtually nonexistent. The area receives little use presumably because there is little to attract visitors, who are drawn instead to the other nearby areas containing a wealth of special features.

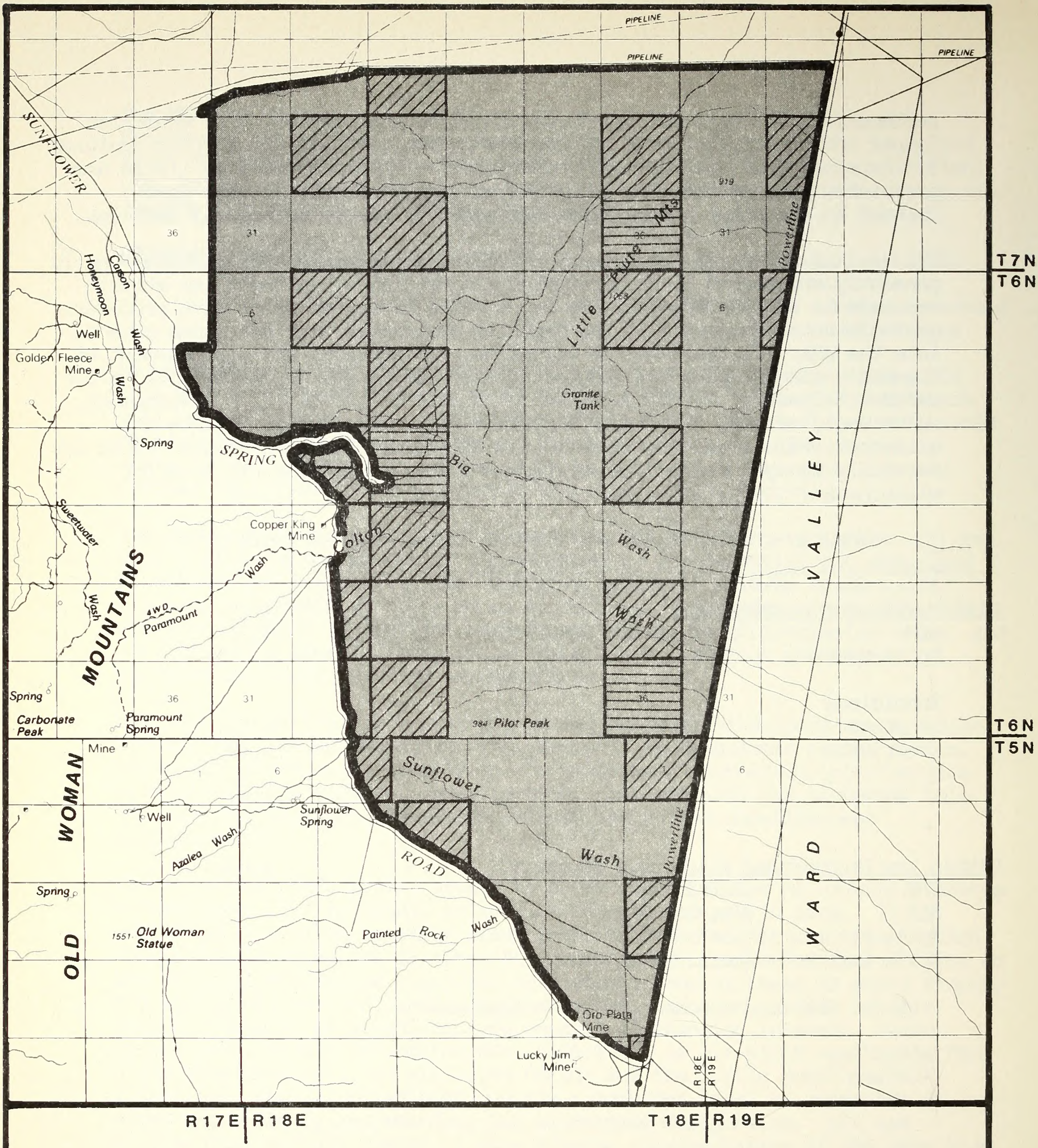
The WSA has a moderate occurrence potential for a variety of minerals and is presently encumbered by 62 unpatented mining claims. Although an attempt was made to exclude from the WSA mines which have been major past producers, geologic data suggests that the deposits associated with the mines extend into the WSA. In the event of wilderness designation, BLM's assessment of the WSA's mineral potential suggests that some of the 62 claims would prove valid. Holders of valid claims would be able to proceed with development, which would make it difficult to protect wilderness values. Since the wilderness values are not notable, the WSA appears to have greater value for carefully managed mineral exploration and development than it does for wilderness.

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	30,526
Split Estate	(BLM surface only)	0
Inholdings		
State		1,919
Private		10,497
Total		42,942

Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	0
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		0
Inholdings		
State		0
Private		0

Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	30,526
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		30,526


PIPELINE
PIPELINE
PIPELINE
SUNFLOWER
Honeymoon
Carson
Wash
Well
Golden Fleece Mine
Wash
Spring
SPRING
Big
Little Piute Mts
919
31
36
6
1068
Powerline
Granite Tank
Copper King Mine
Colton
Wash
Wash
Sweetwater
Wash
MOUNTAINS
4WD
Paramount
Spring
Carbonate Peak
Paramount Spring
36
31
36
31
384 Pilot Peak
Mine
WOMAN
OLD
Well
1
6
Sunflower
Sunflower Spring
Azalea Wash
ROAD
Wash
Powerline
Spring
1551 Old Woman Statue
Painted Rock Wash
Oro Plata Mine
Lucky Jim Mine
VALLEY
WARD
T7N
T6N
T6N
T5N
R18E
R19E
R17E R18E
T18E R19E

NONE RECOMMENDED FOR WILDERNESS

▒ RECOMMENDED FOR NONWILDERNESS

▦ LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS

▥ SPLIT ESTATE

▤ STATE

▨ PRIVATE

Pilot Peak Proposal

MAP-1

0 1 2 3

MILES

N

CDCA-295

JUNE, 1988

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The area is essentially in a primitive and natural condition. A few mining prospects are located near the point where Big Wash crosses Sunflower Springs Road. However, because of the hill immediately east of the prospect area, the prospects are visually screened from the rest of the area. Hence, effects on the natural character of the land are minimal. A primitive way skirts the western side and the southern tip of the Little Piute Mountains. The dense vegetation renders the route unnoticeable from the majority of the WSA.

2. Solitude: Opportunities for solitude are good throughout the WSA. The densely vegetated bajadas, rolling hills and washes of the WSA tend to screen users from one another. Low levels of vehicle traffic present within and adjacent to the study area also enhance the feeling of solitude.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: Although the WSA does provide opportunities for a primitive recreational experience, it has attracted almost no use of this type.

4. Special Features: Native American utilization of the WSA continued into historic times. The southern portion of the study area was used for antelope and deer hunting by the Chemehuevi until 1926. Seasonal collecting continues to date. There is potential for additional temporary occupation sites, petroglyphs, pictographs, lithic and ceramic scatters. In addition, burial sites may be located within the WSA. At this time, one potential burial site is located just outside of the WSA boundary and others have been recorded within the nearby Old Woman Mountains WSA, (CDCA-299).

   Portions of the study area were used for military maneuvers in the early 1940's as part of the Desert Training Center. The potential for unexploded ordnance exists. These materials are considered public property, but are highly sought after as memorabilia and can prove to be extremely hazardous. With the exception of prehistoric cultural resources, the remains of human activities are extremely limited within this WSA.

   A portion of the Pilot Peak WSA is within the Fenner-Chemehuevi Valley Habitat Management Area. The primary management objective for this area is the protection and enhancement of wildlife habitat and wash vegetation with emphasis on protection of desert tortoise habitat. The bajadas and larger washes provide good habitat for the desert tortoise, with densities often exceeding 100 per square mile. The desert tortoise is a BLM Sensitive species and is under status review by the U.S. Fish and Wildlife Service for listing as a threatened species. The desert bighorn sheep is also a BLM sensitive species and occasionally occurs in the WSA, but on a transient basis. No permanent bighorn populations or permanent water sources are known to exist in the Pilot Peak WSA. No Federal- or State-listed rare, threatened or endangered wildlife species are known to occur in this WSA.

B. Diversity in the National Wilderness Preservation System (NWPS)

1. Assessing the diversity of natural systems and features as represented by ecosystems: The WSA contains 30,526 acres of the American Desert/Creosote Bush (*Larrea*) ecosystem. This ecosystem is widespread in the California Desert and is currently represented within the NWPS.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas		Other BLM Studies	
	areas	acres	areas	acres
	NATIONWIDE			
American Desert/Creosote Bush	1	343,753	117	4,237,383
	CALIFORNIA			
American Desert/Creosote Bush	1	343,753	88	3,623,579

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of six major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a five-hour drive of the population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS areas areas	 acres	Other BLM Studies areas	 acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Bakersfield	32	4,071,358	128	3,998,548
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Riverside-San Bernardino	22	2,031,054	205	7,658,649
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The WSA is within 50 air miles of 12 BLM WSAs recommended for wilderness designation; 11 are within the CDCA and one is administered by Arizona's Phoenix District. The closest designated wilderness area is in Joshua Tree National Monument, managed by the National Park Service, 60 miles southwest.

C. Manageability

The Pilot Peak WSA is manageable as wilderness. However, manageability is complicated by the following factors: (1) a large zone of moderate mineral potential coupled with a large number of mining claims; (2) the presence of a designated utility corridor partially within the northern and southern boundaries of the WSA; and (3) the presence of large blocks of private lands.

The WSA contains areas of moderate mineral potential for a variety of minerals and is presently encumbered by 62 mining claims. Holders of valid claims would be able to proceed with developments deemed necessary or reasonably incidental to their mining operation mining developments could significantly alter natural conditions at the site and potentially disrupt opportunities for solitude over a much greater area.

Designation as wilderness has the potential to conflict with development of future communication and energy transmission facilities. The northern and eastern boundaries are within a four-mile wide energy and utility transmission corridor identified by the BLM and the State of California in their Western Regional Corridor Study (1980). Wilderness designation of the Pilot Peak WSA (CDCA-295), the Stepladder Mountains

WSA (CDCA-294) or the Bigelow Cholla WSA (CDCA-290) would prohibit full development of this corridor, forcing installation of new energy transmission lines in other corridors or in areas not previously disturbed. Depending upon which WSAs are ultimately designated wilderness within the CDCA, there may be constraints placed upon the long-term energy and communication transmission capabilities in the southwestern United States.

Approximately 29% of the WSA is composed of non-Federal lands. This sizeable acreage, consisting of numerous individual parcels, would have to be acquired to assure that uses incompatible with wilderness management do not occur.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

New data not available during the development of the CDCA Plan upgraded the quality of the mineral data regarding the WSA. Map 2 reflects the mineral resource potential of the WSA based on this new data.

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Pilot Peak WSA is located in the BLM Piute Mountain and the BLM Old Woman Mountains Geology-Energy-Minerals (G-E-M) Resource Areas (GRA). The 1980 G-E-M resource data in the wilderness section of the CDCA Plan EIS (Volume B, Appendix III) for this WSA had not been fully analyzed, integrated and interpreted at the time the wilderness recommendation was made. G-E-M data in the EIS did state that the WSA had a potential for metals, uranium, limestone and oil and gas (eastern quarter of the WSA). As of December, 1979, there were 67 claims recorded with the BLM.

   The Piute Mountains GRA file data was not available for review, but mineral resource data for the adjacent Old Woman Mountains GRA file was available.

   BLM file data in 1980 for the Old Woman GRA indicated a moderate occurrence potential for copper, lead, silver, and zinc in the west-central part of the WSA surrounding the Copper King Mine, located just outside the western WSA boundary. According to the GRA report, the mineralization at the Copper King Mine occurs in a Paleozoic limestone host. Other file data for the Old Woman GRA identified a medium potential for oil and gas in the southeastern part of this WSA. Large bodies of limestone and or dolomite occur around Carbonate peak about five miles southwest of this WSA; the same geology extends northeast into the WSA (including the area of the Copper King Mine). The southwestern part of the WSA was considered favorable, but unclassified, for uranium.

No mines or prospects are known to occur in this WSA. Due to the omission of file data from the Piute Mountains GRA, the occurrence potentials for uranium and limestone cannot be adequately supported. Similar geologic environments as observed at the Copper King, Lucky Jim, and Oro Plata mines (just outside the western boundary of the WSA) were noted in other areas within the WSA.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should Be Considered in the Final Recommendation: No U.S. Geological Survey (USGS) or U.S. Bureau of Mines (BOM) mineral surveys were conducted for this WSA because it recommended nonsuitable for wilderness designation.

   As of January, 1988, there had been no interest in or exploration for oil and gas in this WSA. This would reduce the 1980 medium potential classification to unclassified under the BLM mineral resource classification system based on lack of sufficient resource data.

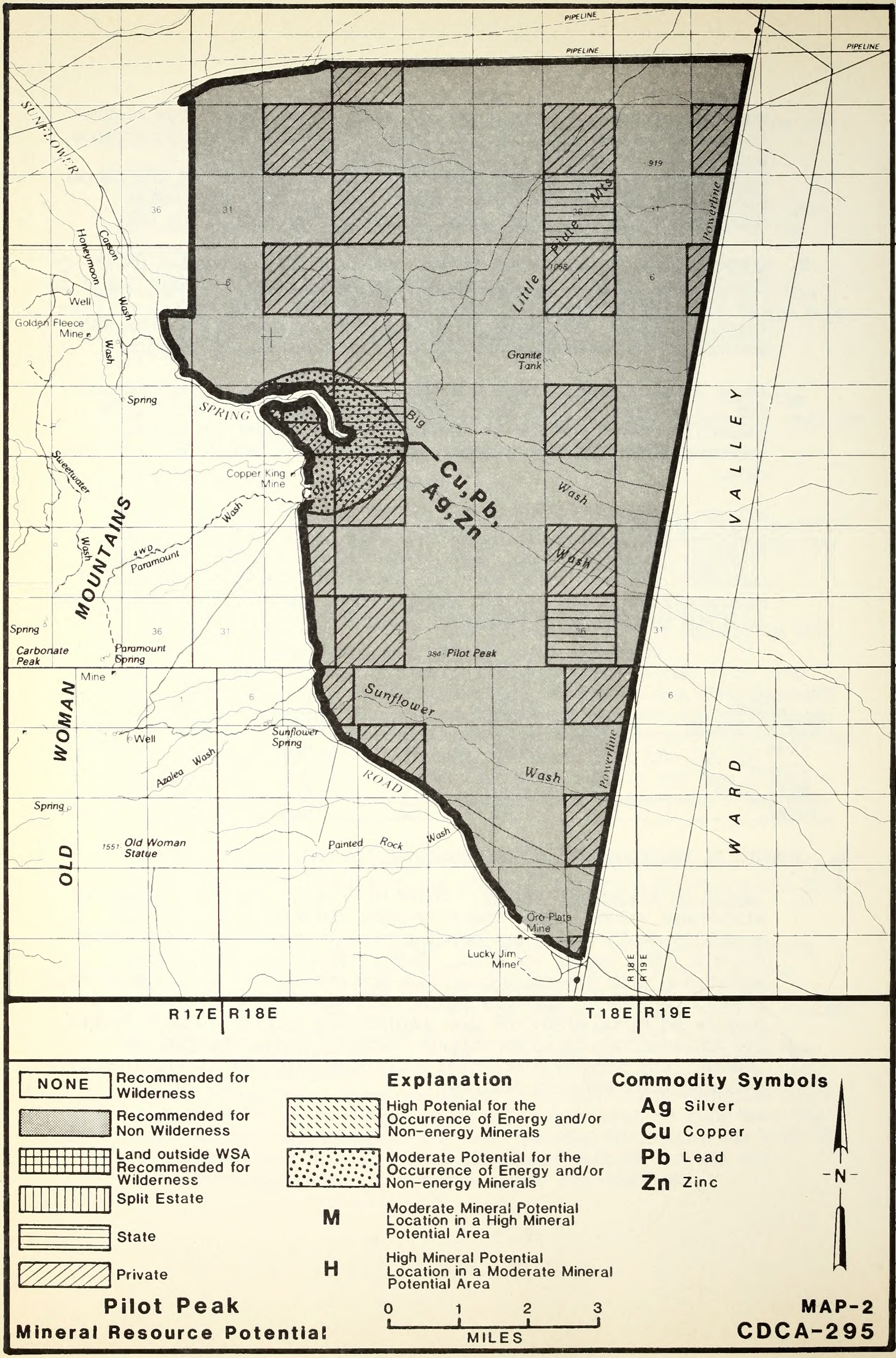
   All 62 unpatented mining claims in the WSA are located in the southeastern portion of the WSA and were believed to be staked for uranium. As of December, 1987, no mining or exploration plans of operation had been filed with the BLM within the WSA. Unpatented mining claims in the WSA are summarized by the following table taken from BLM records dated December, 1987.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	N/A	62	62	N/A	1,240	1,240
Placer	N/A	0	0	N/A	0	0
Mill Site	N/A	0	0	N/A	0	0
Total	N/A	62	62	N/A	1,240	1,240

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: There will be no immediate impact or wilderness values. Over the long-term, existing solitude will gradually decline with projected gradually increasing off-highway vehicle (OHV) use of the area. Noise and surface disturbance associated with mineral exploration and development will result in a gradual decline in solitude and naturalness. This adverse impact is considered minor since OHV use, exploration and development levels are not expected to substantially increase beyond current use levels. Any surface disturbing activities would be constrained by existing management guidelines.


PIPELINE
PIPELINE
PIPELINE
SUNFLOWER
36
31
919
Little Piute Mts
36
31
Powerline
T7N
T6N
Honeymoon
Carson
Well
Wash
Golden Fleece Mine
Wash
1
6
1058
1
6
Granite Tank
Spring
SPRING
Big
Cu, Pb, Ag, Zn
Copper King Mine
Colton
Wash
Sweetwater
VALLEY
Wash
Wash
MOUNTAINS
4WD
Paramount
Wash
Spring
36
31
36
31
Carbonate Peak
Paramount Spring
384 Pilot Peak
T6N
T5N
Mine
Sunflower
1
6
1
6
WOMAN
Well
Sunflower Spring
Azalea Wash
ROAD
Wash
Powerline
WARD
Spring
1551 Old Woman Statue
Painted Rock Wash
OLD
Oro Plata Mine
Lucky Jim Mine
R18E
R19E
R17E R18E
T18E R19E
NONE Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
Ag Silver
Cu Copper
Pb Lead
Zn Zinc
N
0 1 2 3
MILES

Pilot Peak

Mineral Resource Potential

MAP-2

CDCA-295

2. Impact on Habitat of Sensitive Wildlife Species: There will be have a minor adverse impact on wildlife habitat. Monitoring and patrol efforts and mitigation measures to be stipulated as part of any authorized resource development activities will assure that sensitive species receive adequate protection. Extensive baseline data and monitoring studies will be undertaken as outlined in the Fenner/Chemehuevi Valley Habitat Management Plan, with annual review to provide a basis for establishing additional protective measures, if necessary.

3. Impact on Locatable Mineral Exploration and Development: Opportunities for future exploration and development would be available. Mining activities would be restricted as a result of regulations and management guidelines outlined in the CDCA and EMNSA Plans which.

4. Impact on Motorized Recreation Use Levels: Motorized recreation use would continue on designated routes of travel within the WSA as identified in the EMNSA Plan.

5. Impact on Energy and Utility Corridors: Full utilization of the utility corridor would be allowed consistent with CDCA Plan guidelines.

6. Impact on Cultural Resources: Some loss of archaeological values will occur as a result of mineral exploration and development. This loss will be localized, primarily concentrated in the areas of moderate mineral potential comprising ten percent of the WSA. Existing Federal laws and BLM policy plans will lessen the magnitude of this loss by requiring extensive mitigation or avoidance of any impacts to these sites.

7. Impact on Native American Uses and Values: Vehicle access to traditional collection sites will be retained.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the Final CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Inaccuracies that are known to exist are noted in parentheses.

1. Inventory Phase: Comments pertaining to inventory criteria supported the findings.

2. Study Phase: Ten comments were received on this WSA, with six favoring wilderness designation and four wishing to continue multiple use management. Those favoring wilderness were dismayed that this area had not been included in the early inventory. They cited the fine wilderness values - excellent opportunities for solitude and primitive and unconfined recreation and the scenic beauty of the Little Piute Mountains, whose marble forms spectacular pinnacles and cliffs.

   Features which some felt interfere with the wilderness experience were transmission lines, pipelines, scattered buildings, a railroad and station, and 2,560 acres of grazing land. The unit was listed as part of the Old Woman mining district and was said to contain copper, tungsten, mercury, lead, gold and silver. Rockhounds want access to search for vaughn marble, onyx, orbicular jasper, and other gemstones.

   There were no letters responding to the Public Input Workbook of 3/15/79.

3. Draft Plan Alternatives: No public comments specific to this WSA were received in response to the Draft Plan Alternatives. However, this was one of the many WSAs opposed by the National Outdoor Coalition (NOC), a coalition of mining, rockhounding, and off-highway vehicle organizations. A large number of club members sent in printed coupons supporting multiple use classification of moderate use for this area. This was in agreement with the recommendation of the Use Alternative. Conservation-oriented individuals and organizations approved the Protection Alternatives which recommended wilderness designation for this area.

4. Proposed Plan: Motorized vehicle oriented recreationists and conservation groups maintained the same positions stated for the Draft Plan Alternatives. Comments were general, rather than specific to this particular WSA.

   No comments were received from local governments.

Old Woman Mountains

CDCA 299

OLD WOMAN MOUNTAINS WILDERNESS STUDY AREA (WSA)

(CDCA-299)

1. THE STUDY AREA --- 153,763 acres

The Old Woman Mountains WSA is located in San Bernardino County within the south central portion of the California Desert Conservation Area (CDCA). The nearest town is Needles, California located 35 miles east of the Old Woman Mountains northeastern boundary. The WSA includes 116,505 acres of public land under the jurisdiction of the Bureau of Land Management (BLM), 30,249 acres of private land and 7,009 acres of land owned by the State of California. No split estate lands exist within the WSA (see Map 1 and Table 1).

The northwestern boundary parallels an underground natural gas pipeline right-of-way and maintained road heading west for five miles. This right-of-way and portions of the WSA are within a designated energy and utility corridor (see Manageability). On the western side of the Old Woman Mountains, the boundary drops south and traverses a paved road for one and one-half miles to Skeleton Pass. From this point, the boundary continues east for seven miles and cherrystems the Carbonate Gulch road and the road to a Public Water Reserve in section 33, T. 6 N., R. 17 E., SBBM. Two miles south of Skeleton Pass, the boundary continues east for seven miles and the Scanlon Gulch road and blocks of private lands. At the intersection of Scanlon Gulch road and the Atkison, Topeka & Santa Fe (ATS&F) railroad track, the boundary traverses southeast for 12.5 miles to the railroad siding of Chubbock. Ten miles of road and associated mining scars northeast of Chubbock are cherrystemmed from the WSA boundary. The remaining southwestern boundary follows the railroad maintained diversion dikes or a maintained road for 15 miles from Chubbock to three and one-half miles east of Milligan. From this point, the boundary turns north following a 200KV transmission line right-of-way for 17 miles to the Lucky Jim Mine. This right-of-way and portions of the WSA are also within a designated energy and utility corridor (see Manageability). From the Lucky Jim Mine heading northwest, the boundary is not easily discernible on the ground as it was drawn to exclude extensive surface disturbance from past mining activities and does not follow any obvious natural features. It continues for 12 miles where it intersects with the natural gas pipeline maintenance road.

Approximately one-quarter of the WSA is non-public land. These sections are oriented in north-south alternating strips and effectively divide the WSA into two segments.

The 116,505 public land acres within the WSA contain landforms consisting of 35% alluvial fans, 40% mountains, 13% sand-covered hills, ten percent dissected fans and two percent pediments. Elevations range from 800 feet in the drainage bottoms to over 5300 feet atop Old Woman Peak. Other prominent peaks include the Old Woman Statue (5,000 feet), a granite monolith resembling the figure of an old woman from which the range takes its name.

The massive, fault-lifted Old Woman Mountains dominate the WSA, extending some 35 miles north-south and up to 28 miles in an east-west direction. The WSA falls within a transition zone between the Lower Colorado and Mojave deserts and existing resources replicate those found throughout the entire CDCA, although sensitive wildlife species may be found within the Old Woman Mountains (See Special Features). Overall, creosote bush scrub dominates the lower elevations, grading into a mixed desert scrub at the middle elevations with a juniper-pinyon pine woodland located in the higher elevations. A desert dry wash association exists along the washes. No BLM sensitive or Federal- or State-listed rare, threatened and/or endangered plant species are known to exist within the WSA.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EIS) for the CDCA Plan: protection, use, balanced, and no action; a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

0	acres recommended for wilderness
116,505	BLM acres recommended for nonwilderness

No wilderness is the recommendation for the Old Woman Mountains WSA. The entire acreage in this WSA is released for uses other than wilderness. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The known mineral values and potential for development, the need to keep the land available for expansion of designated and planned energy and utility corridors, coupled with the mosaic pattern of land ownership and the lack of outstanding wilderness resources, outweigh the area's value for recommendation as a unit within the National Wilderness Preservation System (NWPS).

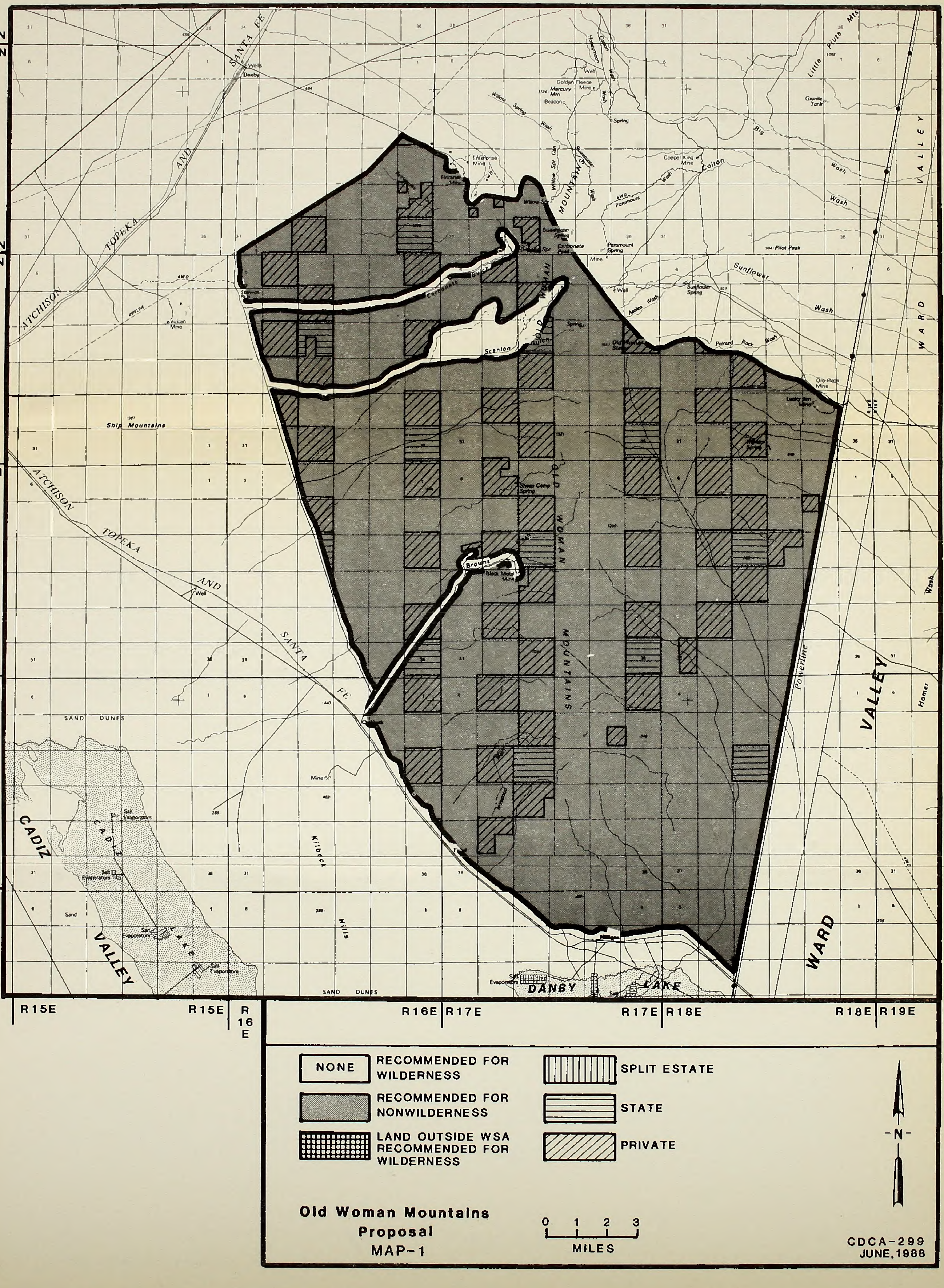
The WSA has been a historic producer of precious metals, tungsten, lead, antimony, mercury and limestone. Within the Old Woman Mountains, gold has been produced from the Blue Eagle, Long Shot, and Black Beauty Mines and silver, lead and zinc from the Jumbo Tungsten, Howe, Hidden Value, and Udsogn Mines. Reported mineral occurrences include two of limestone-dolomite, and one of silver.

Approximately 25% of the WSA is nonpublic land. This mosaic land ownership pattern breaks the WSA into north-south alternating strips of public lands with many isolated east-west fingerlike extensions. The eastern half of the

WSA is not contiguous with the western half. This pattern of ownership substantially reduces the ability of the BLM to manage this area for wilderness as it is difficult to assure that wilderness values would be maintained.

Historical recreation use is considered low to moderate and is dependent on motorized vehicular access. There are approximately 23 miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use. Use is primarily associated with rockhounding, nature study, and hunting. Most of the motorized vehicle use is concentrated along and beyond the cherrystemmed routes to Carbonate and Scanlon Gulch, and Browns Wash. Sheep Camp spring, within the heart of the Old Woman Mountains, is also a popular spot for rockhounders and hunters. The interior valleys of the Old Woman Mountains afford rockhounders the opportunity to collect quartz crystals, marble, and trilobites. Good quail, chukar and deer hunting opportunities exist throughout the WSA. Very little overnight camping takes place, due in part to the remoteness of the WSA, the lack of easy access, permanent potable water sources, and the availability of more varied WSA's located within a one-hour drive of the Old Woman Mountains.

Management of the Old Woman Mountains in the absence of wilderness designation would follow prescriptions for low and moderate intensity use guidelines as outlined in the CDCA plan. In addition, the existing Fenner-Chemehuevi Habitat Management Plan currently imposes further site-specific restrictions in order to protect cultural resource sites and enhance wildlife habitat and wash vegetation. Management under these guidelines would preserve the wildlife resources and known areas of cultural resource sensitivity as a result of limiting motorized vehicle access to approved routes of travel.


T7N
T6N
T5N
T4N
T3N
T2N
R15E
R16E
R17E
R18E
R19E
ATCHISON TOPEKA AND SANTA FE
Danby
Wells
Golden Fleece Mine
Mercury Mtn
Beacon
Willow Spring Wash
Little Piute Mts
Granite Tank
Big Wash
Copper King Mine
Colton Wash
Enterprise Mine
Florence Mine
Willow Spr
Sweetwater Spring
Carbonate Peak
Paramount Spring
Pilot Peak
Sunflower Wash
Sunflower Spring
Carbonate Gulch
Vulcan Mine
Scanlon Gulch
Painted Rock Wash
Oro-Plata Mine
Lucky Jim Mine
OLD WOMAN MOUNTAINS
Ship Mountains
Sheep Camp Spring
Browns
Black Metal Mine
Well
Powerline
WARD VALLEY
Homer Wash
SAND DUNES
CADIZ VALLEY
CADIZ LAKE
Salt Evaporators
Kilbeck Hills
Mine
Fenner
Milligan
DANBY LAKE
NONE
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
0 1 2 3
MILES
-N-

Old Woman Mountains Proposal
MAP-1

CDCA-299
JUNE, 1988

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	116,505
Split Estate	(BLM surface only)	0
Inholdings		
State		7,009
Private		30,249
Total		153,763

Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	0
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		0
Inholdings		
State		0
Private		0

Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	116,505
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		116,505

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: Numerous mining prospects, corrals, water tanks and evidence of motorized recreational travel are within the WSA. These impacts are fairly isolated; thus the majority of the WSA still remains largely unaffected by man's works.

2. Solitude: Despite the presence of outside influences, including the railroad on the south and vehicle traffic along the utility transmission line road on the east, opportunities for solitude remain good due to the large size, remoteness, and dispersed levels

of visitor use within this WSA. Although there are no unique features of note, the area does offer a variety of terrain and vegetation that provide the visitor good opportunities for solitude and primitive recreation.

This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: The wide open spaces of the bajadas and internal valleys with expansive views towards the Turtle, Ship, and Stepladder Mountains WSA's, add to the feeling of spaciousness and unconfinement. Narrow canyons, rocky and steep ridges and peaks tend to screen visitors from the sight of one another.

4. Special Features: Wildlife diversity is fairly high as many different habitat types are encompassed. The desert bighorn sheep, a BLM sensitive species, is probably the most important wildlife resource in the WSA. A population of at least 40, and perhaps as many as 60 bighorn sheep exist in the Old Woman Mountains. Concentrations appear to be in and around Dripping Spring and Long Spring in the northern part of the range and around Sheep Camp Spring in the more southern portion of the WSA. The desert bajadas and larger washes provide good habitat for the desert tortoise, with densities of up to 50 individuals per square mile. The desert tortoise is a protected species in the State of California and is also a BLM sensitive species and is currently under status review by the U.S. Fish and Wildlife Service for listing as a threatened species.

   The Old Woman Mountains have substantial areas of rocky outcrops and rugged peaks which are suitable for raptors. Good foraging habitat for raptors exists in the canyons, lower slopes of the mountains, and on the bajadas and flats. Raptor species likely to be encountered include red-tailed hawks, prairie falcons, golden eagles, Cooper's hawks, American kestrels, as well as several species of owls. The washes and canyons provide good habitat for quail and chukar as well as numerous species of songbirds. Bird densities and species diversity is further enhanced by the presence of numerous water sources.

   Cultural resources resulting from prehistoric exploitation of the natural resources in the WSA are widespread but are more densely distributed near springs and mountain margins. While only four archaeological sites and one historic site have been officially recorded in the Old Woman Mountains, less than one percent of the study area has been formally surveyed. The existence of additional sites is probable. The northern half of this WSA has been designated as sensitive/significant in terms of cultural resources. Recorded prehistoric sites include rock shelters with well-developed middens, numerous potsherd loci, lithics, and faunal remains. Petroglyphs and pictographs are located just outside of the WSA boundary.

Chemehuevi, Mojave and Panamint Shoshone peoples apparently visited the mountains seasonally for collection purposes and to hunt bighorn sheep and deer. Native Americans have indicated the presence of numerous ritual sites, hunting blinds, burial and collection areas within the Old Woman Mountains. The valley floor south and east of the range is crossed by numerous trails. Traditional seasonal collection of food and medicinal herbs continues to date. With the exception of the prehistoric cultural resources, the recorded remains of human activities are extremely limited within this WSA.

B. Diversity in the National Wilderness Preservation System

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 54,685 acres of the American Desert/Palo Verde Cactus Shrub, 54,149 acres of the American Deset/Creosote Bush-Bur Sage, and 7,671 acres of the American Desert/Saltbush-greasewood ecosystems. The American Desert/Salt bush-greasewood ecosystem is not currently represented in the NWPS. Although this WSA would add diversity in the types of ecosystems represented in the NWPS the Bureau has recommended three WSAs with this ecosystem (Saline Valley WSA Inyo Mountains WSA, and North Algodones Dunes WSA) as suitable for wilderness designation. A more extensive and diverse representation of ecologic and geographic features is found within other suitably recommended CDCA WSA's including the Providence (CDCA-263) and Turtle Mountains (CDCA-307) WSAs located roughly 30 miles (north and south) of the Old Woman Mountains WSA.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas areas	NWPS Areas acres	Other BLM Studies areas	Other BLM Studies acres
	NATIONWIDE			
American Desert/Palo Verde-Cactus Shrub	2	271,403	42	1,490,942
American Desert/Creosote Bush-Bur Sage	3	126,033	48	1,517,796
American Desert/Saltbush-Greasewood	0	0	7	242,021
	CALIFORNIA			
American Desert/Palo Verde-Cactus Shrub	0	0	11	538,963
American Desert/Creosote Bush-Bur Sage	2	26,427	20	923,335
American Desert/Saltbush-Greasewood	0	0	7	242,021

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of seven major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a five-hour drive of the population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas areas	NWPS areas acres	Other BLM Studies areas	Other BLM Studies acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Bakersfield	32	4,071,358	128	3,998,548
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The WSA is within 50 air miles of 13 BLM WSAs recommended for wilderness designation. The closest designated wilderness area is in Joshua Tree National Monument, managed by the National Park Service, located 80 miles southwest of the Old Woman Mountains WSA.

C. Manageability

The Old Woman Mountains WSA is manageable as wilderness although there are several significant issues which would complicate manageability of the area as such.

The WSA has a long history of mineral exploration. The boundary is rimmed with evidence of mineral extraction and the interior areas show a known potential for geothermal resources and minerals including copper, tungsten, lead, gold, and silver (See Energy and Mineral Resource Values).

The impacts of designating the area as wilderness have the potential to conflict with development and use of future communication and energy transmission facilities. All or portions of each boundary are within designated or planned energy and transmission utility corridors designated in the Western Regional Corridor Study (1980) and by the final CDCA plan. At this time, Corridor G (north) contains one 30" natural gas pipeline maintained by Southern California Gas (SCG). Corridor E (east) contains two 230KV transmission lines maintained by Southern California Edison (SCE). Two corridors on the west and southwest are designated as four to six miles wide. Designation of the Old Woman Mountain WSA (CDCA-299) or any of the adjacent WSA's including the suitably recommended Turtle Mountain WSA (CDCA-307) or Ship Mountains WSA (CDCA-300) would prohibit any further development in these corridors.

The amount of private inholdings (20% of WSA) and the mosaic pattern of land ownership makes it extremely difficult to assure that existing wilderness values can be maintained in the foreseeable future. Reasonable access to the majority of the inholdings does not currently exist. Anticipated use and development of these inholdings is very likely not to be compatible with wilderness values. During the time required to initiate and complete acquisition for specific parcels, uses not compatible with wilderness may likely occur on other parcels. The wilderness integrity of the entire area could not be assured.

Presently, three guzzlers for desert bighorn sheep are located within the WSA. Maintenance of these guzzlers is required approximately two times per year and normally requires mechanized equipment and vehicles for transportation of materials to the site.

Railroad maintenance crews and the State of California Department of Transportation (CALTRANS) require vehicular access for flood control, derailment repair and dike maintenance. In many cases materials necessary for repair are outside of their existing right-of-way resulting in a future need to enter the WSA.

There are two regions, one in the north and one in the south, which are possibly contaminated by unexploded military ordnance, a remnant of World War II desert training maneuvers.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Old Woman Mountains WSA is located in the BLM Old Woman Geology-Energy-Minerals (G-E-M) Resource Area (GRA). The 1980 G-E-M write-up in the wilderness section of the CDCA Plan EIS (Volume B, Appendix III) indicated that mineral resource data for this WSA had not been fully analyzed, integrated and interpreted at the time the recommendation was made. However, the EIS stated that this WSA had a known potential for tungsten and possible potential for other metals (gold, silver, lead, mercury, antimony), limestone and uranium. As of December 12, 1979, there were 20 claims recorded with the BLM in this WSA.

   BLM GRA file data in 1980 indicated a high occurrence potential for tungsten in the north-central part of the WSA, as shown on the accompanying mineral occurrence potential map. The Hidden Valley Mine near the center of this tungsten area, but cherry-stemmed out of the WSA, is a scheelite-bearing tactite zone, 250 to 300 feet wide, in marble near a granite contact. The scheelite-rich lenses are 10 to 36 feet wide and up to 250 feet long. The mine reportedly produced over 500 units of tungsten oxide from 1943 to 1952. At least two other mines produced a small amount of tungsten from this area.

   Overlapping the tungsten zone is an area with high occurrence potential for base metals (copper, lead and zinc), frequently associated with silver and gold. Silver was mined from northwest-trending quartz veins mainly in the central and southern portions of the Old Woman Mountains (often occurring with gold). Lead and zinc were often produced as by-products. The principal silver producers were the Lucky Jim, Gemco and Silver Wave Mines. Combined production from these three silver mines between 1902 and 1936 is estimated to be $72,000. Copper was noted in numerous occurrences throughout the area, but usually as thin seams and as a minor constituent.

The extreme north-central part of the WSA was identified in the 1980 GRA as having a high occurrence potential for gold. The gold typically occurs in northwest-trending quartz veins in granitic rock. Encompassing all previously mentioned metallic deposits and extending south towards the central portion of the WSA is a moderate occurrence potential for gold, silver, copper, lead and zinc.

Large bodies of limestone and dolomite marble occur on steep slopes north of Scanlon Gulch and on Carbonate Peak, near the northeast border of the WSA. This area was classified as having a high potential for the occurrence of limestone and dolomite on the accompanying mineral occurrence potential map. Tonnage and grade of these occurrences are not known. Exploration for uranium from 1971 through 1977 was known to occur on a large claim block, southeast of Pilot Peak. Contrary to the EIS statement, the GRA files showed no indication of uranium mineralization in the WSA.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should Be Considered in the Final Recommendation: No U.S. Geological Survey or U.S. Bureau of Mines mineral surveys were conducted in this WSA because it is recommended nonsuitable for wilderness designation.

   The geologic environment hosting the deposits of the Lucky Jim and Ora Plata mines in the northeastern portion of the WSA is considered to have a high potential for silver, lead, and zinc.

   Unpatented lode and placer mining claims are concentrated in areas of past mineral production in the north and central portions of the WSA. As of December, 1987, no mining or exploration plans of operations had been filed with the BLM within the WSA. Unpatented mining claims located in the WSA are summarized in the following table taken from BLM records dated December, 1987.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	N/A	67	67	N/A	1,340	1,340
Placer	N/A	5	5	N/A	200	200
Mill Site	N/A	0	0	N/A	0	0
Total	N/A	72	72	N/A	1,540	1,540

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: There would be no immediate adverse impact. Over time, existing wilderness values could gradually decline as a result of the projected increase in visitors utilizing OHVs for access. Wilderness values may also experience moderate adverse site-specific adverse impacts (40% of the WSA) as a result of noise and surface disturbance associated with mineral exploration and development. Current restrictive actions cited in

the Fenner-Chemehuevi Habitat Management Plan, CDCA plan and existing regulations serve to lessen potential impacts to the sensitive wildlife habitat and cultural resources that are located within the Old Woman Mountains.

2. Impact on Locatable Mineral Exploration and Development: Opportunities for future exploration and development would continue to be available. However mining activities would be restricted as a result of existing laws and regulations and management guidelines outlined in the CDCA Plan which limit vehicle access and mitigates adverse effects on sensitive resource values.

3. Impact on Motorized Recreation Use Levels: Motorized recreation use would continue on designated routes of travel within the WSA as identified in the CDCA Plan.

4. Impact on Desert Bighorn Sheep Habitat: Impacts to desert bighorn sheep and their habitat will be negligible, consisting of minor site-specific habitat loss as a result of surface disturbance associated with OHV use and mineral exploration and development.

5. Impact on Desert Tortoise Habitat: Localized impacts caused by vehicle use and surface disturbance associated and mineral exploration and development will be minor. Management guidelines in the CDCA Plan along with enforcement of State laws will provide protection of this species.

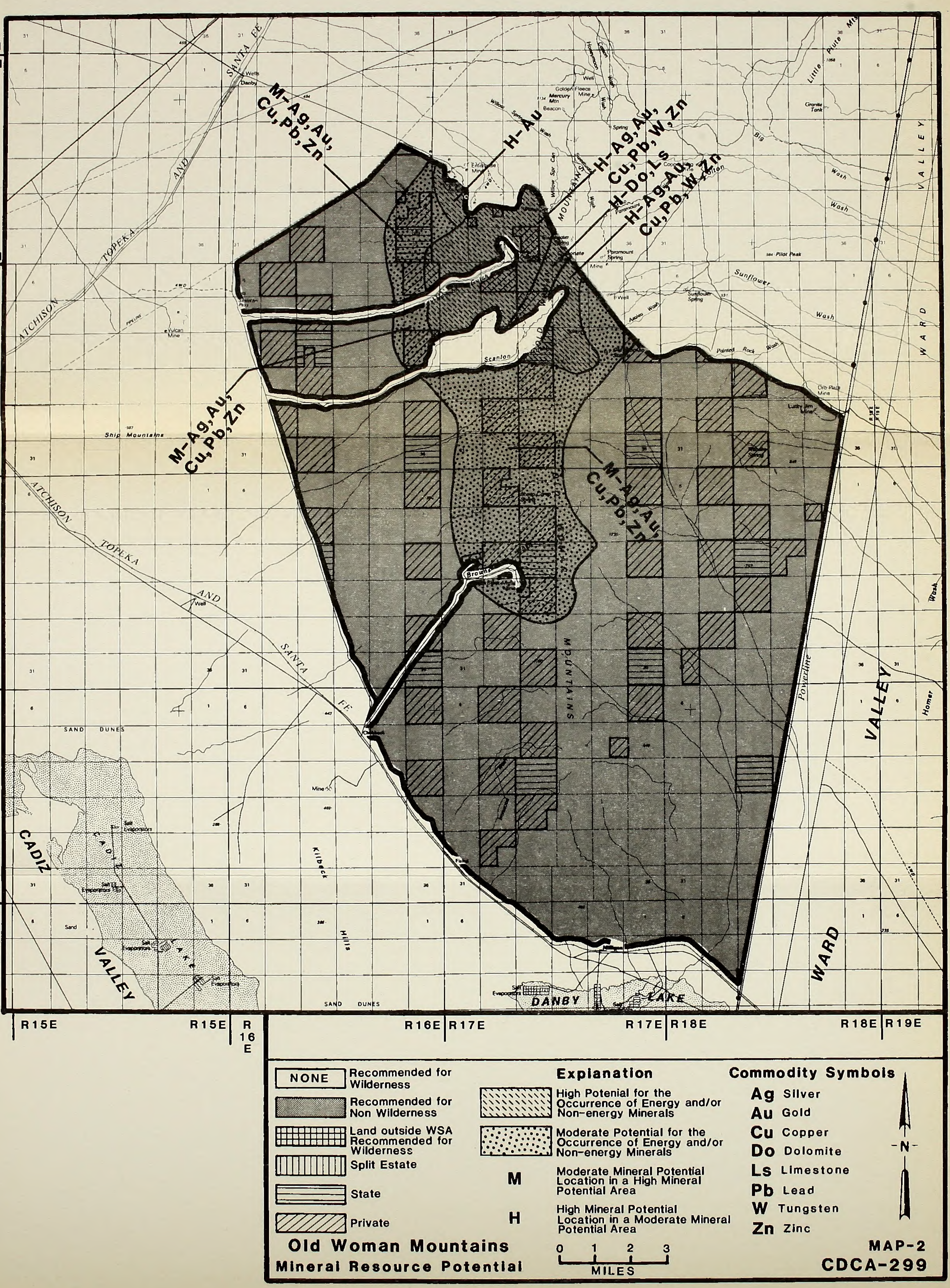
6. Impact on Cultural Resources: Some loss of archaeological values will occur as a result of mineral exploration and development. This loss will be localized, primarily concentrated in the areas of high and moderate mineral potential, comprising 40% of the WSA. Existing Federal laws and BLM guidelines, as outlined in the CDCA Plan, will lessen the magnitude of this loss by requiring extensive mitigation of any impacts.

7. Impact on Native American Values: There will be no impacts. Opportunities for collecting at traditional use sites will continue as they have in the past.

8. Impact on Energy and Utility Corridor Development: These opportunities will remain available subject to restrictions outlined in the CDCA Plan.

F. Local Social and Economic Considerations

No local social or economic impacts were identified in the Final CDCA Plan and EIS. Because this topic was not explored in the EIS, no further discussion of it will occur in this document.


T7N
T6N
T5N
T4N
T3N
T2N
R15E
R15E
R 16 E
R16E
R17E
R17E
R18E
R18E
R19E
M-Ag,Au, Cu,Pb,Zn
H-Au
H-Ag,Au, Cu,Pb,W,Zn
H-Do,Ls
H-Ag,Au, Cu,Pb,W,Zn
M-Ag,Au, Cu,Pb,Zn
M-Ag,Au, Cu,Pb,Zn
ATCHISON TOPEKA AND SANTA FE
Danby
Wells
Golden Fleece Mine
Mercury Mtn
Beacon
Paramount Spring
Pilot Peak
Sunflower Wash
Sunflower Spring
Painted Rock Wash
Scanlon
Vulcan Mine
Ship Mountains
Browns
Oro Plata Mine
Lucky Jim Mine
Big Wash
Little Piute Mts
Granite Tank
WARD VALLEY
Powerline
Homer Wash
MOUNTAINS
SAND DUNES
CADIZ VALLEY
CADIZ LAKE
Salt Evaporators
Sand
Kilbeck Hills
Mine
DANBY LAKE
Explanation
NONE Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
Ag Silver
Au Gold
Cu Copper
Do Dolomite
Ls Limestone
Pb Lead
W Tungsten
Zn Zinc
N
0 1 2 3
MILES

Old Woman Mountains
Mineral Resource Potential

MAP-2
CDCA-299

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Inaccuracies that are known to exist are noted in parentheses.

1. Inventory Phase: Comments show general agreement with the findings. Many specific roads and mining activities were delineated. These were reflected in the WSA boundaries.

2. Study Phase: Many of the 34 letters received concerning this WSA discussed 2(c) inventory criteria in reference to roads and mines. A variety of resource uses were mentioned, including energy and mining, recreation and railroad maintenance. The area has potential for geothermal resources and mineralization including copper, tungsten, lead, gold, and silver. Rockhounds collect quartz crystals, marble, and trilobites. The Old Woman Mountains are a favorite area for these rockhounds and other recreationists who require motorized vehicles. People who commented stated that more land is needed for recreation in the State, not less. Additionally, railroad maintenance crews require access for flood control, derailment repair, and dike maintenance. Wilderness designation would curtail many of these activities.

   Another reason given for opposing wilderness designation of this WSA is the presence of private land, which bisects the area from north to south and constitutes a large percentage of the total WSA---there are less than 5,000 contiguous acres of public lands. Other factors detracting from wilderness quality include the use of the area by military artillery in the past; the railroad, which borders the WSA; the transmission line and roads which cross the area; and the presence of a salt plant and landing field (not within the WSA).

   Letters supporting wilderness designation of the area cited recreational, scientific, geologic and natural values in the area. Washes provide excellent trails for hiking to more remote areas. Rugged hiking in the Old Woman Mountains offers spectacular views of the desert and good campsites. Historic Mines (1889-1902) are worthy of visits and other cultural resources exist throughout the area. Wildlife, including bighorn sheep and scenic values were mentioned. Several respondents recommended adding the excluded northeast portion of the WSA because the historic mining, geologic features and natural values are worthy of wilderness designation.

3. Draft Desert Plan Alternatives: Several comments were received. One wanted more wilderness designated. Another disagreed with the Balanced Alternative. General comments included the belief that exploration for and development of oil, gas, and geothermal resources under the No Action Alternative is the best use for this WSA.

4. Proposed Plan. Conservation- and vehicle-oriented organizations maintained the same positions as for the draft plan alternatives. There were few comments specific to this WSA.

   No comments were received from local governments.

Ship Mountains

CDCA 300

SHIP MOUNTAINS WILDERNESS STUDY AREA (WSA)

(CDCA-300)

1. THE STUDY AREA --- 36,008 acres

The Ship Mountains WSA is located in San Bernardino County in the south-central portion of the California Desert Conservation Area (CDCA). The WSA includes 24,757 acres of public land under the jurisdiction of the Bureau of Land Management (BLM), 1,494 acres of land belonging to the State of California and private inholdings totaling approximately 9,757 acres. No split-estate land exists within the WSA boundaries (see Map 1 and Table 1).

Beginning east to west, the northwest boundary follows the southern edge of a gas pipeline utility maintenance road, excluding the road and surface disturbance associated with the Vulcan Mine. The southwest boundary generally follows the Atkison, Topeka and Sante Fe (AT&SF) Railroad diversion dikes heading southeast to the railroad siding of Chubbock. From here, the eastern boundary follows a gas pipeline maintenance road north until it intersects with the gas pipeline road which forms the northwest boundary. Portions of the east and northwest boundaries are within a four to six mile wide utility/energy transmission corridor identified by the State of California and BLM.

The Ship Mountains lie within the northern one-third of the WSA and dominate the northwestern portion of the WSA extending some seven miles north-south and approximately five miles in an east-west direction. The mountains have many deep canyons, rises, flat-topped buttes, crags, and spires. The northeast corner of the range shows evidence of block-tilted hills and some sand in the form of forerunners to dunes. Long, sandy, gently sloping bajadas occur on the east and west sides of the Ship Mountains. Vegetation consists primarily of a creosote bush scrub and desert dry wash association.

The small size of the mountain range coupled with the lack of permanent water sources, seems to preclude the existence of any significant wildlife habitat or wildlife populations. No permanent bighorn sheep populations exist; only transient range is indicated. The surrounding desert flats are too sparsely vegetated to support any significant desert tortoise populations. WSA 300 contains no important wildlife habitat for any BLM sensitive species and no Federal- or State-listed plant or wildlife species are known to occur within the WSA.

No archaeological sites have been recorded and given the thin vegetative cover and lack of permanent water sources, very few sites are predicted. Some Native American uses still occur within the Ship Mountains (see Special Features).

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EIS) for the CDCA Plan: protection, use, balanced, and no action: a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

0 acres recommended for wilderness
24,757 BLM acres recommended for nonwilderness

No wilderness is the recommendation for the Ship Mountains WSA. The entire acreage in this WSA is released for uses other than wilderness. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The nonsuitable recommendation is based on the following rationale: (1) the area does not possess any unique or outstanding features that are not represented in areas either already part of, or recommended for wilderness designation; (2) the area's value as wilderness is overshadowed by its value for motorized recreation, mineral development and energy transmission; and (3) the extensive amount of private lands would complicate management of the area as wilderness.

The addition of the Ship Mountains WSA to the National Wilderness Preservation System (NWPS) would not add to the diversity or uniqueness of the system, nor would it add significantly to the wilderness recreational opportunities available in the region. These factors, combined with the fact that this WSA has only marginal wilderness values, led to the nonwilderness recommendation.

The WSA, while natural in character, contains no unusual features or resources, and is merely an area of undeveloped public land. It is ecologically similar to other areas identified for wilderness preservation. Within 50 air miles are 12 other BLM study areas recommended for addition to the National Wilderness Preservation System. Many of these 12 areas display the same ecosystem and landforms as this WSA, and also contain notable special features of scientific and general sightseeing interest. Three nearby WSAs, Granite Mountains WSA (CDCA-256), 25 air miles northwest; Fort Piute WSA (CDCA-267), 20 air miles north; and the Turtle Mountains WSA (CDCA-307), ten air miles east, contain a combined total of over 100,000 acres which BLM is recommending for wilderness designation. All are mountainous, and all contain a more diverse representation of the same type of ecosystem found in the Ship Mountains WSA.

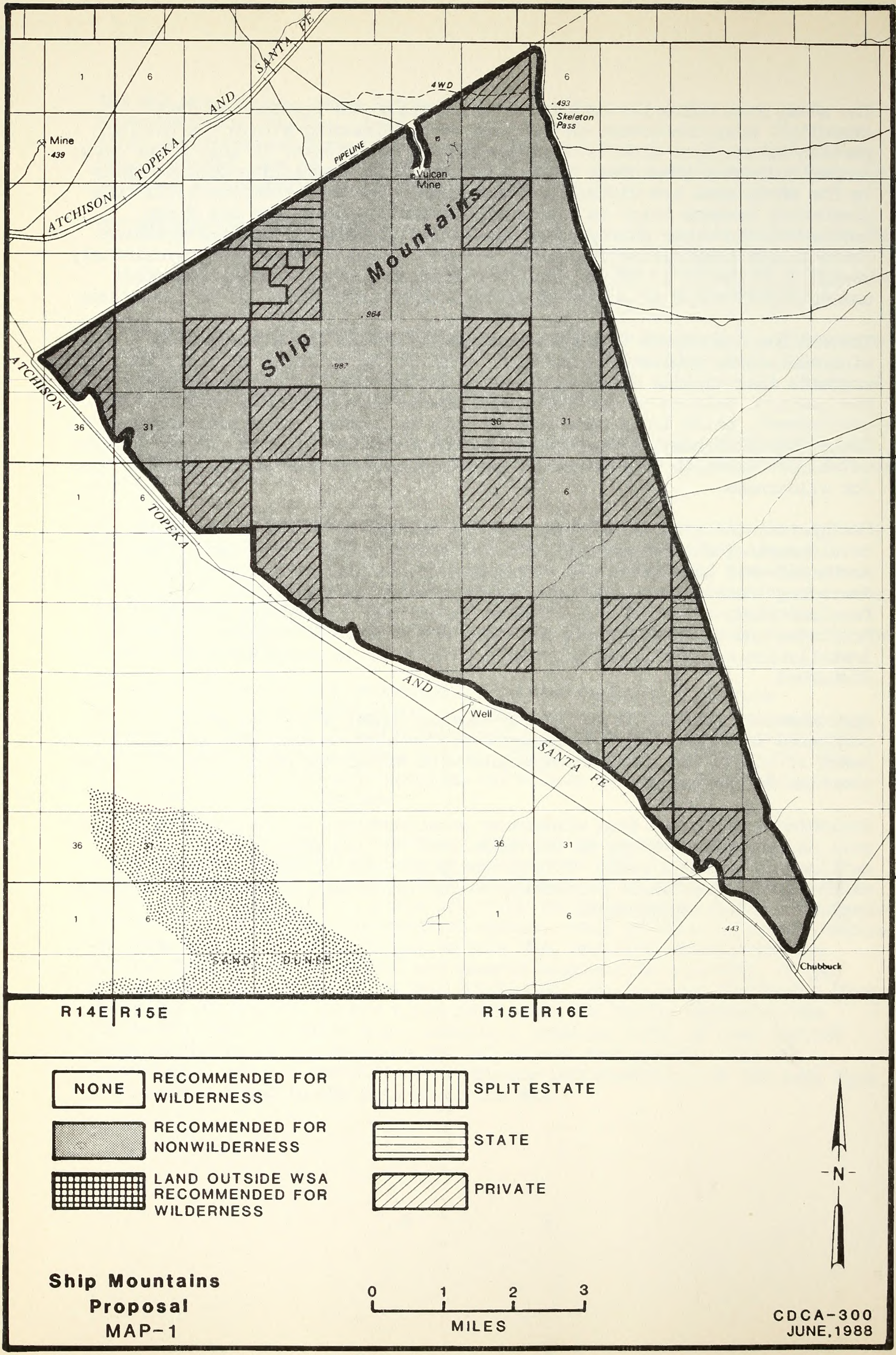
The study area currently receives approximately 500 visitor-use days annually. Most use occurs in the form of rockhounding within the northern portion as the area affords rockhounders the opportunity to search for onyx, jasper and other gemstones. Demand for primitive recreation opportunities in the study area are virtually nonexistent. The area receives little use presumably because there is little to attract visitors, who are drawn instead to the other nearby areas containing a wealth of special features. There are no known primitive routes within the WSA. There are approximately 18 miles of routes of travel including primitive ways, washes, and other unmaintained routes of access which will remain available for vehicular use.

The WSA has a moderate to high occurrence potential for a variety of minerals and is presently encumbered by 15 mining claims. Geologic data suggests that mineral deposits extend into the WSA. After wilderness designation, holders of valid claims would be able to proceed with development, which would make it difficult to protect wilderness values. Since the wilderness values are not notable, the WSA appears to have greater value for carefully managed mineral exploration and development than it does for wilderness.

Designating the study area as wilderness has the potential to conflict with development of future communication and energy transmission facilities. The north and east boundaries are within energy and utility transmission corridors identified by the State of California in the Western Regional Corridor Study (1980). Designation of the Ship Mountains WSA and Old Woman Mountains WSA (CDCA-299) would preclude any further development forcing installation of facilities in other corridors or in areas not previously disturbed.

Approximately 30% of the WSA is non-Federal lands, which are widely scattered in a checkerboard pattern over the study area. This situation makes it likely that uses incompatible with wilderness management will occur sometime in the future.

Following its release from wilderness consideration, the Ship Mountains WSA will be managed according to the guidelines for low intensity use as outlined in the CDCA Plan. This prescription will protect botanical and wildlife resources while permitting controlled access for mineral and energy exploration and development.


T6N
T5N
T5N
T4N
T4N
T3N
R14E
R15E
R15E
R16E
ATCHISON TOPEKA AND SANTA FE
ATCHISON TOPEKA AND SANTA FE
PIPELINE
4WD
Mine
439
493
Skeleton Pass
Vulcan Mine
Ship Mountains
964
987
Well
443
Chubbuck
SAND DUNES
1
6
36
31
NONE
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES

Ship Mountains Proposal

MAP-1

CDCA-300
JUNE, 1988

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	24,757
Split Estate	(BLM surface only)	0
Inholdings		
State		1,494
Private		9,757
Total		36,008
Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	0
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		0
Inholdings		
State		0
Private		0
Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	24,757
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		24,757

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: Overall, the WSA is primarily affected by the forces of nature with man's imprint substantially unnoticeable. Two abandoned mines exist on the west slopes of the Ship Mountains WSA, but their impact on the overall WSA is negligible.

2. Solitude: Opportunities for solitude are available. However, they are constrained by the outside sounds from trains on the AT&SF Railroad which forms the western boundary.

This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: Although these opportunities are available, the resources within the study area do not attract recreationists interested in these activities.

4. Special Features: The Ship Mountains WSA were used as a bighorn sheep hunting area by various groups throughout historic times. Native American informants have indicated that Indian trails cross the valley east of Ship Mountains, leading to and from the Old Woman Mountains. Native Americans still use the valley floor to collect food and medicinal herbs.

B. Diversity in the National Wilderness Preservation System (NWPS)

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 24,757 acres of the American Desert/Creosote Bush-Bur Sage ecosystem. This ecosystem is widespread in the California Desert and is currently represented within the NWPS.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas areas	NWPS Areas acres	Other BLM Studies areas	Other BLM Studies acres
	NATIONWIDE			
American Desert/Creosote Bush-Bur Sage	3	126,033	48	1,547,308
	CALIFORNIA			
American Desert/Creosote Bush-Bur Sage	2	26,427	20	952,847

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of seven major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a five-hour drive of the population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS areas areas	NWPS areas acres	Other BLM Studies areas	Other BLM Studies acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Bakersfield	32	4,071,358	128	3,998,548
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The WSA is within 50 air miles of 13 BLM WSAs recommended for wilderness designation. The closest designated wilderness area is Joshua Tree National Monument, managed by the National Park Service, 50 air miles south of the Ship Mountains WSA.

C. Manageability

The WSA is manageable as wilderness. However, manageability is complicated by large zones of moderate mineral potential encumbered with mining claims and the presence of large blocks of private lands.

The WSA contains areas of moderate to high mineral potential for tungsten, iron, gold, copper and manganese and is presently encumbered by 15 unpatented mining claims.

Approximately 30% of the WSA is composed of non-Federal lands. This sizeable acreage, consisting of numerous individual parcels, would have to be acquired to assure that uses incompatible with wilderness management do not occur.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Ship Mountains WSA (CDCA-300) is located in the Marble Mountains Geology-Energy-Minerals (G-E-M) Resource Area (GRA). BLM G-E-M data in the Wilderness section of the CDCA Plan EIS (Volume B, Appendix III) in 1980 was not complete and had not been fully analyzed, integrated and interpreted at the time of the preliminary wilderness recommendation. The G-E-M narrative in the EIS did state, however, that the WSA had potential for iron and other metals, limestone and silica. BLM records showed that ten unpatented mining claims were on record in the WSA as of December 12, 1979.

   Map 2 reflects the mineral resource potential of the WSA. BLM GRA file data (1980) indicated different degrees of probability for the occurrence of different elements which is translated into either high or moderate occurrence potential and shown on the accompanying mineral occurrence potential map. In the northern part of the WSA, there is high occurrence potential for tungsten, iron and gold and copper. Manganese has a moderate potential for occurrence in the mid-northern part of the WSA as shown.

   There was no uranium anomaly indicated by airborne survey over the WSA, and other data was insufficient to interpret the occurrence potential for other metals.

   Two quartzite, one limestone and one dolomite occurrence was identified within the WSA, and are shown on the accompanying mineral occurrence potential map as having high occurrence potential. The County Report for San Bernardino County by Wright and Others (1953, Journal of Mines and Geology, Volume 49) lists two mines near the WSA. These mines are close to the northern boundary. The Ship Mountain Mine is located at the north end of the Ship Mountains and consists of iron lenses in a brecciated igneous complex. According to Wright and Others (1953), 1,500 tons of ore were mined in 1918, and reserves amount to 42,000 tons of indicated iron ore and 38,000 tons inferred. The Vulcan Mine, about one-half of a mile north of the WSA, consists of two parallel quartz veins, one for copper and one for gold. The major mining activity at this mine occurred between 1935 and 1937, and between 1941 and 1942 with production valued at nearly $80,000 worth of copper and gold.

   Wright and Others (1953) reported one pumicite occurrence is within this WSA. The pumicite deposit is located in the northeastern part of the WSA and occurs in a 50 feet thick tuff layer overlain by basalt. There are several shallow cuts, but no production.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should Be Considered in the Final Recommendation: No U.S. Geological Survey or U.S. Bureau of Mines mineral surveys were conducted in this WSA because it is recommended nonsuitable for wilderness designation.

   As of December 12, 1987, one mining exploration plan of operation has been filed with the BLM within the WSA, but was denied as the resulting surface disturbance would not meet the wilderness interim management criteria. BLM mining claim records show unpatented mining claims within and along the northern boundary of the WSA. The claim locations overlap the high potential zone for metallic minerals shown on the accompanying map. Unpatented mining claims located in the WSA are summarized by the following table taken from BLM records dated December, 1987.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	N/A	11	11	N/A	220	220
Placer	N/A	4	4	N/A	160	160
Mill Site	N/A	0	0	N/A	0	0
Total	N/A	15	15	N/A	380	380

E. Summary of Environmental Consequences of the Proposed Action

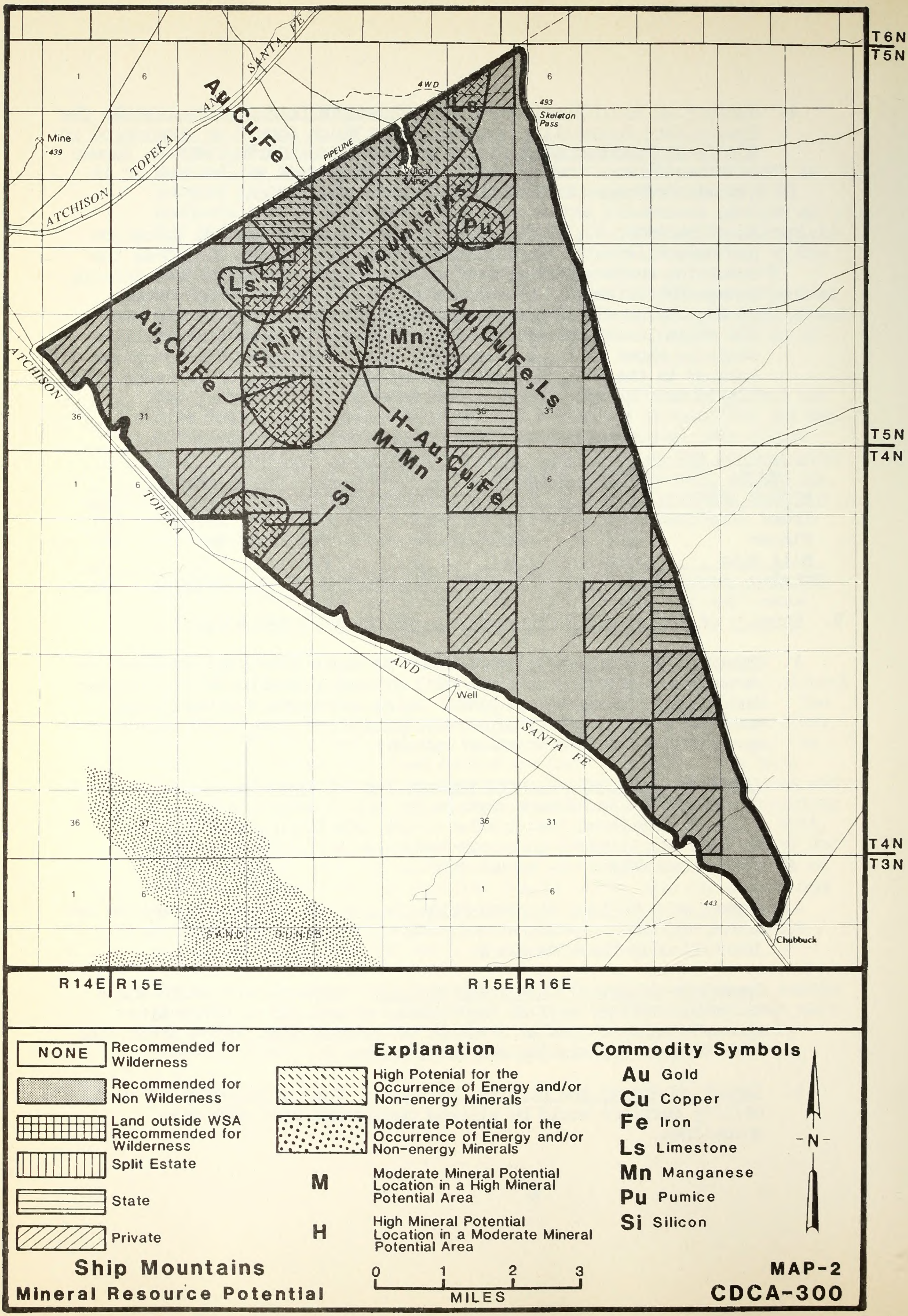
1. Impact on Wilderness Values: Under moderate intensity multiple use management, existing solitude will gradually decline with projected increasing OHV use of the area. Noise and surface disturbances associated with mineral exploration and development will result in a gradual decline in wilderness values.

2. Impact on Locatable Mineral Exploration and Development: Opportunities for future exploration and development would continue to be available subject to the 43 CFR 3809 regulations and the minimal restrictions under the moderate use guidelines contained within the California Desert Plan.

3. Impact on Motorized Recreation Use Levels: Motorized recreation use would continue on designated routes of travel within the WSA as identified in the CDCA Plan.

4. Impact on Desert Bighorn Sheep Habitat: Impacts to bighorn sheep and their habitat will be negligible, consisting of minor site-specific habitat loss as a result of surface disturbance associated with mineral exploration and development.

5. Impact on Energy and Utility Corridors: Full utilization of the utility corridor would be allowed consistent with CDCA Plan guidelines.


T6N
T5N
T5N
T4N
T4N
T3N
R14E
R15E
R15E
R16E
ATCHISON TOPEKA AND SANTA FE
ATCHISON
TOPEKA
AND
SANTA FE
PIPELINE
4WD
493
Skeleton Pass
Mine
439
Vulcan Mine
Ship Mountains
Au,Cu,Fe
Ls
Pu
Mn
Au,Cu,Fe,Ls
Au,Cu,Fe
H-Au,Cu,Fe,
M-Mn
Si
Well
443
Chubbuck
SAND DUNES
1
6
36
31
NONE
Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M
Moderate Mineral Potential Location in a High Mineral Potential Area
H
High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
Au Gold
Cu Copper
Fe Iron
Ls Limestone
Mn Manganese
Pu Pumice
Si Silicon
N
0
1
2
3
MILES

Ship Mountains
Mineral Resource Potential

MAP-2
CDCA-300

6. Impact on Archaeological Resources: Impacts will be site-specific and primarily concentrated in the areas of moderate mineral potential comprising 30% of the WSA. Existing Federal laws and BLM policy along with restrictions outlined in existing management plans will lessen the magnitude of this loss by requiring extensive mitigation or avoidance of any impacts to these sites.

7. Impact on Native American Uses and Values: Sacred features will be subject to protection under the American Indian Religious Freedom Act. Any changes in physical appearance or use of sacred sites will be made only with the concurrence of the affected Native American Group. Native American access to traditional religious sites will be retained.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the Final CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Inaccuracies that are known to exist are noted in parentheses.

1. Inventory Phase: Comments supported the findings and also identified mineral potential and possible energy potential.

2. Study Phase: Of the ten comments received on this WSA, eight opposed and two supported wilderness designation. Opponents mentioned several factors which impair the naturalness and solitude which are needed for the wilderness experience, including mines, roads, and a railway. The mines and tunnels are prominent on the northern side of the WSA and are visible due to a lack of vegetative screening. The railroad and a pipeline were claimed to have a two and a half mile zone of influence within which their noise and visibility interferes with wilderness quality. Respondents claimed that the area has potential for iron containing minerals and oil, gas, and geothermal energy resources. The California Mining Association stated that the unit contains less than 5000 continuous acres of public land and is, therefore, not qualified for wilderness designation. The Santa Fe Railway wanted continued vehicular access for maintaining dikes and for conducting flash flood surveys and drainage surveys.

   Proponents of wilderness designation for this WSA stated that human imprints are unnoticeable except around the Vulcan Mine and that the unit provides outstanding opportunities for solitude and primitive and unconfined recreation. One respondent felt that the WSA should be part of the Old Woman WSA, since the road between the two units does not meet the qualifications of a road.

Only one comment was received in response to the Public Input Workbook (3/15/79). A rockhound organization asked that the area be neither open or closed but recommended a limited use classification to allow for access by rockhounds.

3. Draft Plan Alternatives: There were few comments specific to this WSA in response to the Draft Plan Alternatives. However, this was one of the many WSAs opposed by the National Outdoor Coalition (NOC), a coalition of mining, rockhounding, and off-highway vehicle groups. A large number of club members sent in printed coupons supporting a multiple use classification of moderate use for this area. This was in agreement with recommendations of both the Use Alternative and the Balanced Alternative. Conservation-oriented groups and individuals approved the Protection Alternatives which recommended wilderness for this area.

4. Proposed Plan: There were few specific comments on this WSA. In general, the groups needing vehicular access for their recreation of mineral exploration were pleased with the Proposed Plan recommendation of moderate use for this WSA. Wilderness proponents were, of course, in disagreement.

   No comments were received from local governments.

Cleghorn Lakes

CDCA 304

CLEGHORN LAKES WILDERNESS STUDY AREA (WSA)

(CDCA-304)

1. THE STUDY AREA --- 33,249 acres

The Cleghorn Lakes WSA is located in San Bernardino County within the south-central portion of the California Desert Conservation Area (CDCA). The community of Twentynine Palms is 16 miles to the west. The WSA includes 26,324 acres of public land under the jurisdiction of the Bureau of land Management (BLM), 284 acres owned by the State of California, and 6,641 acres of private land (see Map 1 and Table 1).

The northern boundary of the rectangular WSA is the United States Twentynine Palms Marine Corp's Base. The east boundary is formed by the paved Amboy Road and transmission, telephone, and gas line rights-of-way. A telephone line support road forms the southern border. The west boundary is a straight line that angles northwest and traverses the bajada that flanks the Bullion Mountains.

The WSA includes the southern tip of the rugged Bullion Mountains. Landforms within the mountains vary with rock type and contain both rugged, boulder, granitic rocks and the more rounded metamorphic rocks. Large alluvial aprons or bajadas slope eastward and westward on each side of the mountains. The dry Cleghorn Lakes are located within an interior valley of the mountain range. Elevations in the area rise from 1,400 to 4,079 feet within four miles. The vegetative composition includes a typical creosote bush scrub plant assemblage that exhibits some variability based on elevation. Annual precipitation varies between three and six inches.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EIS) for the CDCA Plan: protection, use, balanced, and no action; a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

0	acres recommended for wilderness
26,324	BLM acres recommended for nonwilderness

No wilderness is the recommendation for the Cleghorn Lakes WSA. The entire acreage in this WSA is released for uses other than wilderness. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts. Future activities will be controlled by a combination of low and moderate intensity use management as prescribed in the CDCA Plan.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

Known and potential mineral reserves, land ownership patterns, and the needs of the adjacent Marine Corp Base were of greater significance than the area's value as wilderness. Designation of the area as wilderness would not contribute any additional unique or distinct features to the National Wilderness Preservation System (NWPS). Other WSAs in the California Desert that are recommended suitable offer a more extensive and diverse representation of desert wilderness values.

The WSA has long been recognized for its mineral wealth. Rockhounders are also known to frequent the area. The majority of the WSA has moderate potential for the occurrence of placer gold. These resources are actively being explored just across the southern border of the WSA. In addition, just east of the WSA, the Sheep Hole Mine has 165,000 tons of identified gold resources present. An area within the southwest portion of the WSA has a high potential for iron and includes the Copper World Mine. This mine produced 1,000 tons of iron in 1944. Substantial portions of the WSA also have areas with moderate potentials for sodium, radioactive resources, sand and gravel, and silica. Currently there are identified needs and use for the sand and gravel reserves within the WSA.

Existing land ownership patterns substantially reduce the ability of the BLM to manage the area for wilderness. 20% of the WSA is non-public land and there are a minimum of 16 individual private parcels. The majority of these inholdings are in the northern one-third of the WSA and many sections of public land (each 640 acres) are isolated and not contiguous to the rest of the WSA. There are approximately 18 miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use. The majority of the private inholdings do not have existing access.

The Marine Corp Base officially requested a right-of-way for an access route through the central portion of the WSA. BLM denied this request because of the potential for impairment to wilderness values. However, the Marine Corp base still is interested in the right-of-way and believes the access route is vital to the mission of the combat training center which is located on the base. It would provide access by military vehicles (tanks, etc.) to a portion of the Base that is currently inaccessible due to terrain.

The wildlife and vegetative resources within the area are typical of the surrounding desert. The area contains no Fedreal- or State-listed threatened or endangered plant or animal species. Two BLM sensitive species, the desert tortoise and the desert bighorn sheep, are known to occur in the WSA. However, under the land use prescriptions for the area in the CDCA Plan, these species will receive priority consideration over conflicting land uses regardless of wilderness designation. The tortoise is under status review by the U.S. Fish and Wildlife Service for possible listing as a threatened or endangered species. The CDCA Plan also affords special management attention to the Crucifixion Thorn Unusual Plant Assemblage which is on the eastern edge of the area.

There are no areas of known cultural resource sensitivity and no Native American resources have been documented for the WSA.

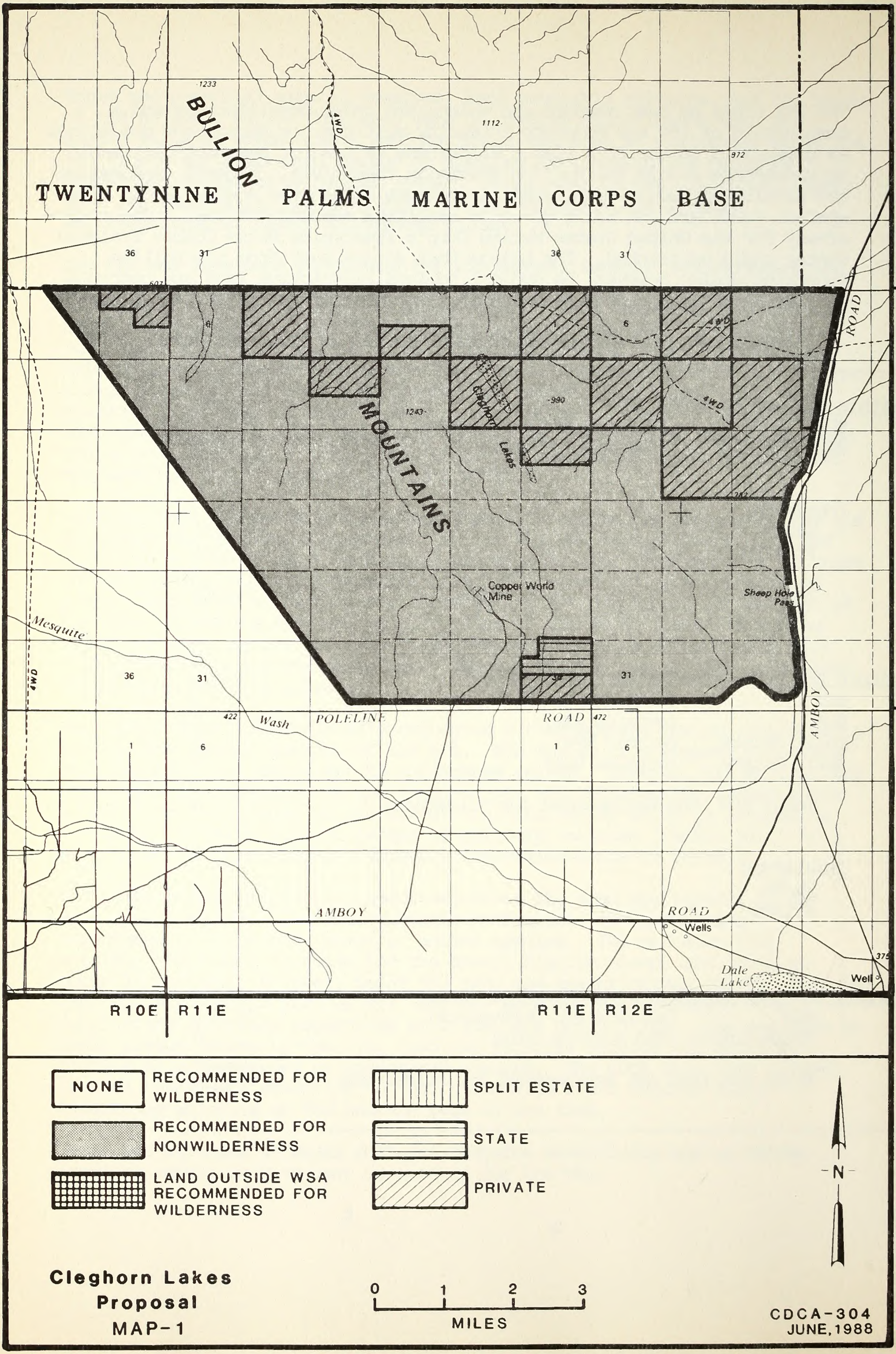
The WSA would be best managed and maintained under nonwilderness and a combination of low and moderate intensity multiple use management guidelines as prescribed in the CDCA Plan. Wilderness values for the most part would be maintained within the Bullion Mountains themselves. Mineral exploration and development would be allowed to continue within the mountains but with special consideration being given to sensitive resource values. The right-of-way for the United States Marine Corp's Twentynine Palms Combat Training Center could be granted. The bajada that slopes west from the Bullion Mountains would, however, be subject to less restrictive land use controls. This area contains a concentration of known mineral values.

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	26,324
Split Estate	(BLM surface only)	0
Inholdings		
State		284
Private		6,641
Total		33,249

Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	0
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		0
Inholdings		
State		0
Private		0

Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	26,324
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		26,324


TWENTYNINE PALMS MARINE CORPS BASE
BULLION
MOUNTAINS
Cleghorn Lakes
Copper World Mine
Sheep Hole Pass
4WD
ROAD
AMBOY
Mesquite Wash
POLELINE ROAD
AMBOY ROAD
Wells
Dale Lake
Well
1233
1112
972
607
1243
990
782
422
472
375
36
31
6
1
T3N
T2N
T1N
R10E
R11E
R12E
NONE
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES

Cleghorn Lakes Proposal
MAP-1

CDCA-304
JUNE, 1988

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The Cleghorn Lakes WSA generally retains its natural character. However, scenic values are considered only moderate. Terrain variation in the Bullion Mountains and the overall size of the area screens out the influence of the few man-made features located within the boundaries. These features include a few unmaintained routes of travel and abandoned mines. Overall, man's influence in the area is substantially unnoticeable.

2. Solitude: Outstanding opportunities for solitude are available within the area, primarily in the mountainous portion where terrain variety provides visual screening. On the broad bajadas, such screening is lacking because of the lack of vegetation and topographic diversity. Noise from military aerial training exercises as well as tremors and noise from ordnance explosions in the adjacent Combat Training Center also limit opportunities.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: Outstanding opportunities for primitive and unconfined types of recreation are available. With both mountain and valley types of terrain in the area, primitive type recreational experiences can be either of the intimate, enclosed type or of the vast open type.

4. Special Features: There are three square miles of desert tortoise habitat within the WSA with densities of 20 to 50 individuals per square mile. The tortoise is currently a candidate for formal listing as a threatened species by the U.S. Fish and Wildlife Service. The WSA also contains a small population of desert bighorn sheep (1979 - three individuals) which are considered a BLM sensitive species. There are 14 square miles of seasonal bighorn sheep range and 11 square miles of permanent bighorn range in the Bullion Mountains.

   The Crucifixion Thorn Unusual Plant Assemblage is present on the eastern edge of the WSA. This assemblage represents a disjunct population of the crucifixion thorn that is well outside its normal range. This species is more commonly found in the Sonoran Desert. The remaining landforms, ecological diversity, and geological features are not unusual, they are typical of features common throughout the surrounding deserts and mountains.

B. Diversity in the National Wilderness Preservation System (NWPS)

1. Assessing the diversity of natural systems and features as represented by ecosystems: The WSA contains 26,324 acres of the American Desert/Creosote bush (Larrea) ecosystem, which is represented in other WSAs that recommended suitable for wilderness designation in the CDCA. The Cleghorn Lakes WSA would not increase the diversity of the types of ecosystems represented in the NWPS.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas		Other BLM Studies	
	areas	acres	areas	acres
	NATIONWIDE			
American Desert/Creosote Bush	1	343,753	117	4,241,585
	CALIFORNIA			
American Desert/Creosote Bush	1	343,753	88	3,627,781

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of eight major population centers. Table 3 summarizes the number and acreage of designated areas and BLM study areas within a five-hour drive of the population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS areas areas	NWPS areas acres	Other BLM Studies areas	Other BLM Studies acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Bakersfield	32	4,071,358	128	3,998,548
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Oxnard-Ventura	23	2,195,198	85	2,703,260
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The WSA is within 50 air miles of 13 BLM WSAs recommended for wilderness designation. The closest designated wilderness area is Joshua Tree Wilderness, administered by Joshua Tree National Monument, 20 miles south of the WSA.

C. Manageability

The Cleghorn Lakes WSA is manageable as wilderness. However several significant issues would complicate manageability of the area for wilderness.

The WSA and surrounding area has a long history of mineral exploration and development. The area contains known mineral values. Full-scale development of any valid mining claims has high potential to impact a significant portion of the WSA. Access requirements for such developments would result in similar impacts.

Private inholdings comprise 20% of the WSA and the mosaic pattern of land ownership breaks the WSA into many noncontiguous parcels. It would be difficult to assure that wilderness values are maintained in the northern third of the WSA. Some of these private lands also have moderate potentials for mineral wealth. Anticipated use and development of these inholdings is very likely not to be compatible with wilderness values. Reasonable access does not currently exist to most of the inholdings.

The BLM is again being asked to consider the right-of-way request for the Combat Training Center at the Twentynine Palms Marine Corp Base. The need is genuine and there are few other alternatives. However, such an access route would seriously undermine the integrity of the area.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Cleghorn Lakes WSA (CDCA-304) is located in the BLM Dale Lake Geology-Energy-Minerals (G-E-M) Resource Area (GRA). BLM G-E-M data in the wilderness portion of the Desert plan EIS (Volume B, Appendix III) indicated in 1980 that the resource data for this WSA had not been fully analyzed, integrated, and interpreted. The 1980 GRA did indicate, however, that the WSA had possible potential for iron, uranium and other metals. BLM mining claim records dated December 12, 1979, showed 20 unpatented mining claims within the WSA.

   The draft 1980 GRA report showed that an area in the southwestern portion of the WSA had high potential for the occurrence of iron based on past production of 1,000 tons in 1944 from the Copper World mine (Copper World mining district). The alluvial areas in the southeastern portion of the WSA were classified as having moderate potential for the occurrence of placer gold. A moderate potential for the occurrence of lode gold was assigned in the 1980 GRA file and report for the WSA. This was based on the placer gold occurrences. The potential for base metal occurrence was not classified, and was therefore, unknown. An area in the northeast portion of the WSA was classified as having high potential for the occurrence of silica resources was evidenced by the presence of a vein of quartz 100 feet long by 30 feet wide.

   An area of Tertiary rocks in the southeast portion of WSA was classified as having moderate potential for the occurrence of zeolites. The southwest part of the WSA has moderate potential for the occurrence of sodium compounds based on the prospectively valuable classification by the U.S. Geological Survey (USGS) in 1978 and past production of sodium minerals from nearby Dale Lake. Two areas in the WSA were identified in the GRA file to have moderate potential for the occurrence of radioactive resources. This classification was based on the National Uranium Resource Evaluation airborne gamma ray survey, and drill hole exploration by American Copper and Nickel Co. in 1979. The company abandoned their claims for uranium in 1981.

   The 1980 GRA high potential for silica resource occurrence based on the quartz outcrop in the northeast part of the WSA is considered moderate under the BLM classification system because the quartz is stained with iron and manganese oxides. It can only be considered a "possible" silica source and it cannot be considered reserves. This change in classification is identified on Map 2.

The GRA zeolite outcrop identified in the 1980 GRA was misclassified as moderate. Since Tertiary sediments only have "potential" for zeolites they are not an occurrence of zeolites. Therefore, the potential should have been classified as low potential based on a favorable geologic environment.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Recommendation: No USGS or U.S. Bureau of Mines (BOM) mineral survey was conducted for this WSA because the WSA is recommended nonsuitable for wilderness designation. However, a mineral survey was conducted by BOM for the adjacent Sheephole-Cadiz WSA to the east. New data not available during the development of the CDCA Plan substantially upgraded the quality of the mineral data regarding the Cleghorn Lakes WSA. Map 2 reflects the mineral resource potential of the WSA based on this new data.

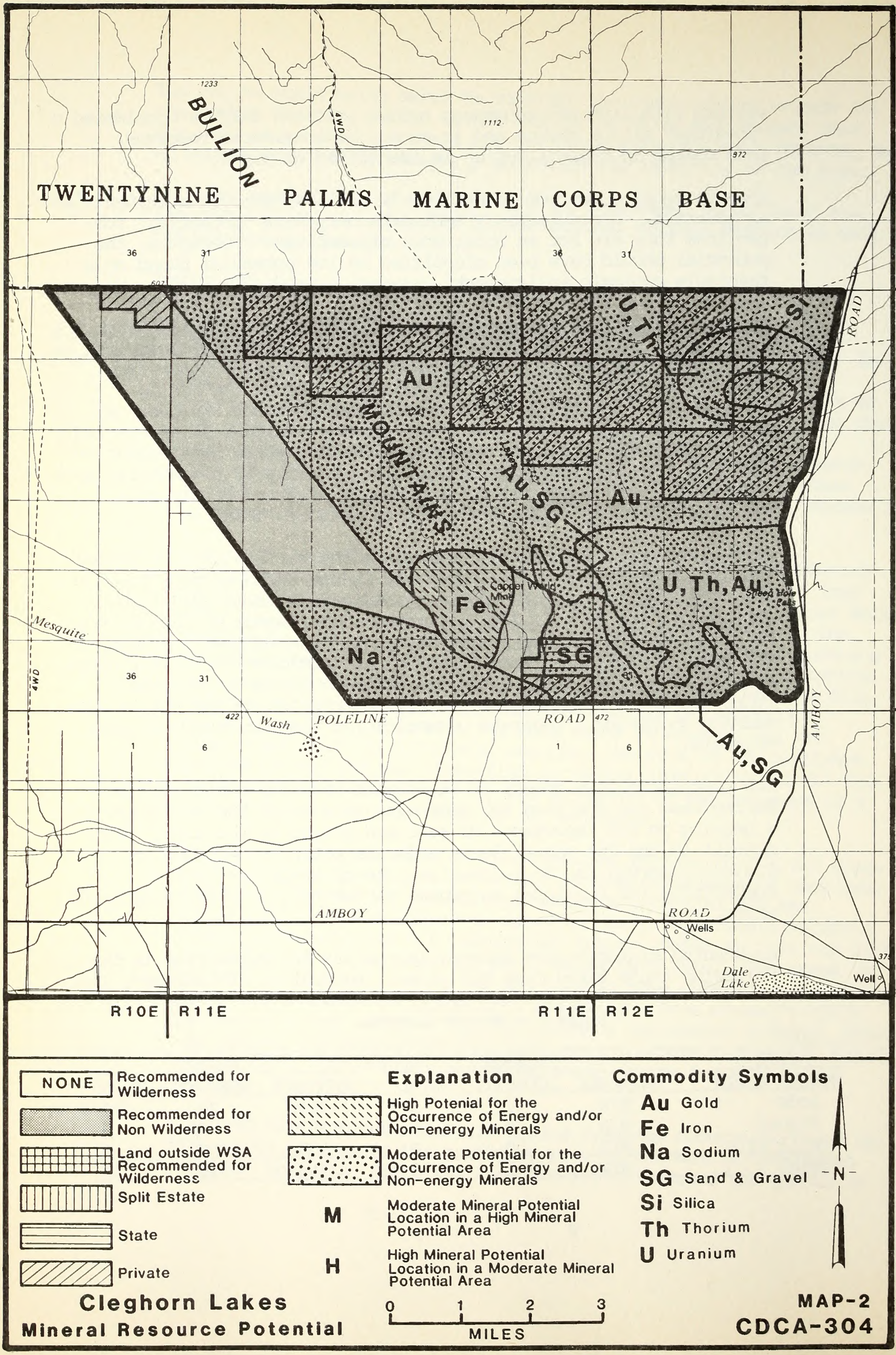
   Open File Report (OFR 82-957) describes the results of this survey and indicates that new data generated in the southern portion of the WSA confirms the 1980 GRA moderate rating for placer gold. The Bureau of Mines data in 1982 indicated the presence of 165,000 tons of gold resources at the nearby Sheephole Mine located just east of the WSA. In 1986, Lawrence Street filed "Notices" for placer mining encompassing 1,600 acres along the southern border of the WSA. Under the BLM classification system, the portion of the WSA is considered as having a moderate potential for the occurrence of gold deposits.

   The continuing development of the combat training center at the Marine base and the need for aggregate to support the expansion has a bearing on the importance of sand and gravel in the area. The deposit in the WSA has at least moderate potential because of limited reserves in the local area. As of December, 1987, competition for the local aggregate market ranged as far away as 65 miles.

   Unpatented mining claims located in the WSA are summarized in the following table taken from BLM mineral records as of December, 1987.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	N/A	1	1	N/A	20	20
Placer	N/A	0	0	N/A	0	0
Mill Site	N/A	0	0	N/A	0	0
Total	N/A	1	1	N/A	20	20


TWENTYNINE PALMS MARINE CORPS BASE
BULLION
MOUNTAINS
T3N
T2N
T1N
R10E
R11E
R12E
Au
Au, SG
U, Th
Si
U, Th, Au
Fe
Na
SG
Copper World Mine
Sheep Hole Pass
Mesquite
Wash
POLELINE ROAD
AMBOY ROAD
ROAD
AMBOY
4WD
Wells
Well
Dale Lake
1233
1112
972
422
472
36
31
1
6
NONE
Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
Au Gold
Fe Iron
Na Sodium
SG Sand & Gravel
Si Silica
Th Thorium
U Uranium
N
0 1 2 3
MILES

Cleghorn Lakes
Mineral Resource Potential

MAP-2
CDCA-304

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Noise, surface disturbance and access requirements for mineral exploration and development will impact naturalness, solitude, and primitive and unconfined types of recreation. Although the majority of the WSA has identified mineral values and the long-term probability of development is good, impacts will be localized to specific areas of development. Military aircraft conducting low-level training maneuvers will continue to momentarily disrupt solitude.

2. Impact on Minerals Exploration and Development: Opportunities for exploration and development of minerals will continue to be available subject to applicable laws, regulations and the low and moderate intensity, management guidelines established in the CDCA Plan.

3. Impact on Desert Bighorn Sheep, Desert Tortoise and Crucifixion Thorn Habitat: Management guidelines in the CDCA Plan provide for protection of the habitat over conflicting land uses regardless of wilderness designation. Such protection includes controlling of highway vehicle travel and limiting mining access and exploration during the lambing season. However, should an economical body of ore be discovered or a sand and gravel operation be approved within critical habitat, the habitat would be lost. Individual crucifixion thorn plants would be lost or have to be transplanted.

4. Impact on Twentynine Palms Marine Corps Base: Consistent with CDCA Plan guidelines the BLM could entertain an application for a military right-of-way through the area.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the Final CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Inaccuracies that are known to exist are noted in parentheses.

1. Inventory Phase: Comments supported the findings and indicated potential for minerals and energy resources.

2. Study Phase: Of the ten comments received on this WSA, seven opposed and three supported wilderness. Opponents mentioned access needs for mineral and energy exploration and development and for

educational, scientific and recreational uses, particularly rockhounding. Excellent examples of feldspar phenocryst were said to exist in the Sheep Hole Pass area. One respondent complained that the amount of contiguous public land amounted to less than 5000 acres. A spokesperson for the Twentynine Palms Marine Base stated that adjacent lands would be affected by the noise from overflying aircraft and by tremors and noise from ordnance explosions. Amboy Road and a telephone line which border the WSA were cited as a disturbing factor for the wilderness experience.

Proponents of wilderness designation for this unit claimed that the area is affected primarily by the forces of nature and that the imprint of human activities is unnoticeable. They said that excellent opportunities for solitude and primitive recreation are available.

One comment was received in response to the Public Input Workbook (3/15/79). This was a second letter from the U.S. Navy concerning the nearby Twentynine Palms Marine Base and its effects on the quality of this WSA.

3. Draft Plan Alternatives: There were few comments specific to this WSA in response to the Draft Plan Alternatives. However, this WSA was one of those opposed by the National Outdoor Coalition, a coalition of mining, rockhounding, and off-highway vehicle groups. A large number of club members sent in printed forms supporting a multiple use classification of moderate use for this area. This recommendation was in agreement with the Use and No Action Alternatives but partly in disagreement with the Balanced Alternative which called for a classification of limited use in the eastern portion of the WSA. Conservation-oriented individuals and organizations preferred the Protection Alternative which recommended a wilderness classification for this area.

4. Proposed Plan: There were few specific comments on this unit. In general, the groups needing vehicular access for recreation or mineral exploration were mostly opposed to the Proposed Plan which was similar to the Balanced Alternative in that it recommended limited use for the eastern portion of the WSA. Conservationists were also displeased with the Proposed Plan since it did not recommend wilderness for this area.

   No comments were received from local governments.

Amboy Crater

CDCA 304A

AMBOY CRATER WILDERNESS STUDY AREA (WSA)

(CDCA-304A)

1. THE STUDY AREA --- 14,895 acres

The Amboy Crater WSA is located in south-central San Bernardino County, near the center of the California Desert Conservation Area (CDCA). The nearest cities are Needles, California 85 road miles northeast; Twentynine Palms, California 50 road miles southwest; and Barstow, California 80 road miles northwest. The study area contains 12,527 acres of public land under the jurisdiction of the Bureau of Land Management (BLM), and 2,368 acres of private inholdings (see Map 1 and Table 1).

The WSA borders the National Trails Highway on the north, excluding section 1 TSN rile and section 36 TGN rile, and Twentynine Palms Marine Corps Base on the west and south. A road accessing the American Mine forms the southernmost one and one-quarter miles of the east boundary. The remainder of the east boundary is not aligned with any physical or specific legal feature, but was drawn to exclude private property and public lands lacking wilderness characteristics.

The steep-sided, black cinder cone of Amboy Crater and the surrounding lava flows are the dominant features in this study area. The WSA is composed of 60% lava flows, 15% playas, 15% alluvial fans, and ten percent plains. The WSA's sparse vegetation is creosote bush scrub and allscale scrub. Very little vegetation has been able to gain a foothold on the lava flows, and the cone itself is void of plant life.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EISs) for the CDCA Plan: protection, use, balanced, and no action; a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

0	acres recommended for wilderness
12,527	BLM acres recommended for nonwilderness

No wilderness is the recommendation for the Amboy Crater WSA. The entire acreage in this WSA is released for uses other than wilderness. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The no-wilderness recommendation is based on the following rationale: (1) the WSA does not possess any unique features or resources that are not already represented in areas identified for wilderness preservation; (2) the area has only marginal wilderness characteristics; (3) the WSA's value as wilderness is overshadowed by its value for motorized recreation; and (4) the WSA contains saleable mineral materials for which there is a demonstrated demand.

Amboy Crater is a good example of a volcanic cinder cone. However, it is not unique to this area. An equally impressive display of recent volcanic activity can be found in the Cinder Cones WSA (CDCA-239), which is recommended for wilderness designation. Amboy Crater WSA's ecosystem is typical of the surrounding Mojave Desert. The WSA is comprised of common desert plant assemblages and contains no special wildlife populations. Within 50 air miles of this WSA are 15 BLM study areas recommended for wilderness designation. These 15 areas encompass the region's most outstanding special features, and in addition provide a representative sample of typical Mojave Desert wildlands.

The WSA's naturalness and opportunities for solitude are mediocre. Primitive vehicle ways wind through the lava flows, established through years of off-highway vehicle (OHV) touring and military training activities. Section 34 in the northwest corner of the WSA has been utilized as a mineral materials source. Random tank tracks from decades of military maneuvers occur throughout the WSA. The air space above the WSA is restricted to the military, and is regularly used for low-level military aircraft training maneuvers. Further disruptions to solitude occasionally occur adjacent to the WSA's east side area from heavy equipment working the salt deposits of Bristol Dry Lake, and trucks hauling the material to the nearby salt plant. The flat topography and sparse vegetation of this area do little to screen the sights and sounds of the salt mining activity. Adjacent to the southeast corner of the WSA is the America Mine; its activities are also audible and visible within the adjacent portion of the study area. On the north boundary of the WSA, the busy National Trails Highway and the railroad tracks parallel to it lessen opportunities for solitude on the lava flows within the WSA.

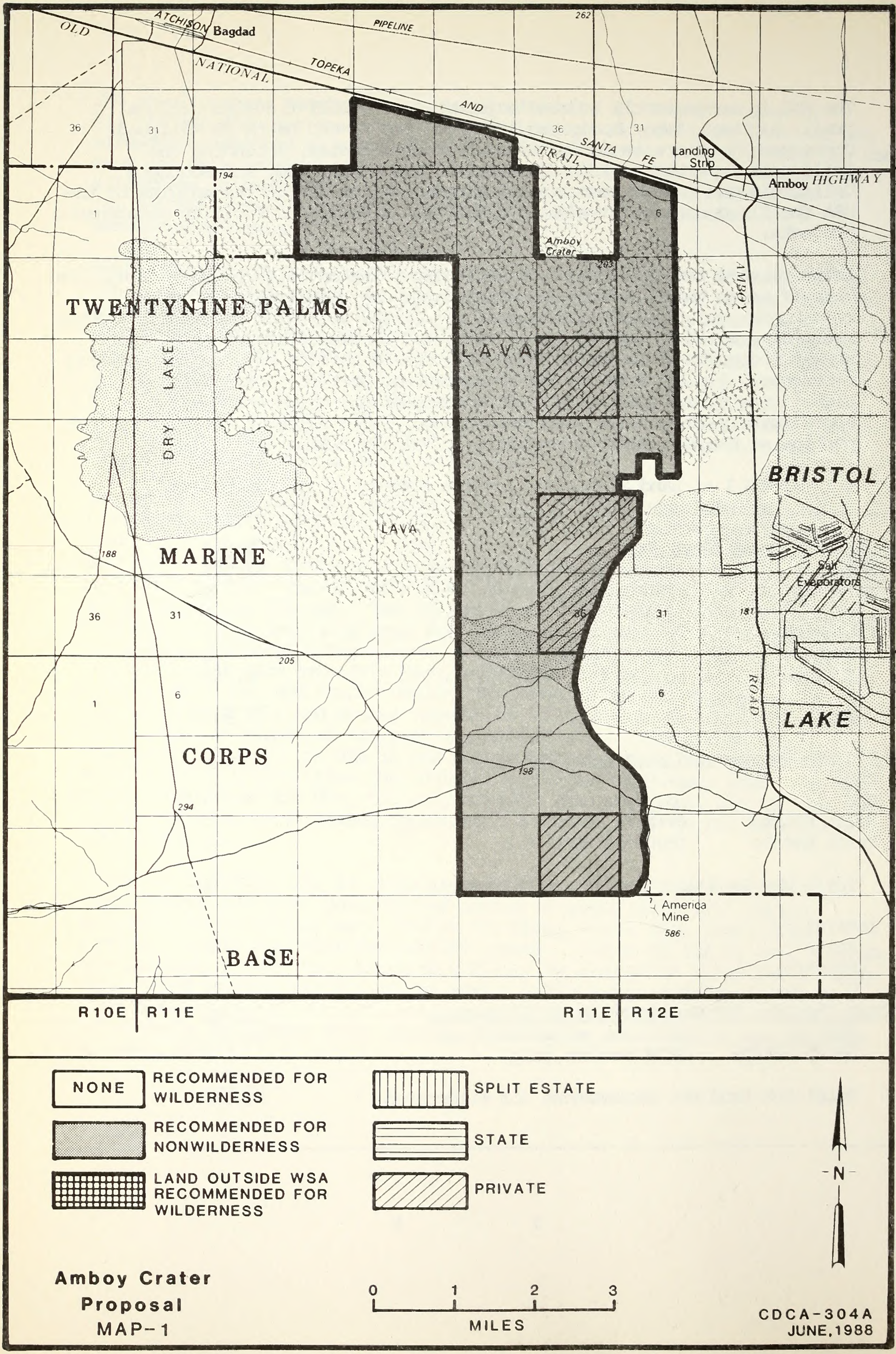
There are approximately 17 miles of routes of travel including primitive ways, washes and other unmaintained routes of acess which will remain available for vehicular use. Within the Amboy Crater WSA, there is a moderate demand for motorized vehicle access. Routes of travel into the WSA are utilized for military training activity by Twentynine Palms Marine Corps Base, which borders the WSA on the west. Vehicle travel into the WSA is also associated with recreational use (1,500 visitor-use days annually) principally four-wheel drive touring and camping, and teaching and research at Amboy Crater.

The WSA is conveniently located adjacent to the well-traveled National Trails Highway, Amboy Road, and Atchison, Topeka and Santa Fe Railroad. Consequently, there is demand from numerous agencies, including the California Department of Transportation, AT&SF Railroad, and Southern California Gas Company for mineral materials from within the margins of the WSA for flood control, diversion dikes, and highway and facility maintenance projects.

After release from wilderness consideration, the majority of the WSA will be managed under the CDCA Plan's low intensity use guidelines. This management prescription would permit restricted vehicular access for mineral materials, military training maneuvers, and continued recreational and research opportunities while protecting the identified natural and cultural resources. A small area in the south-central portion is recommended for high-intensity use management. This designation, which encompasses approximately 20% of the total WSA acreage, would allow development in that portion of the WSA where the majority of mining claims are located.

TABLE 1 - Land Status and Acreage Summary of the Study Area

		Acres
Within Wilderness Study Area		
BLM	(surface and subsurface)	12,527
Split Estate	(BLM surface only)	0
Inholdings		
State		0
Private		2,368
Total		14,895
Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	0
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		0
Inholdings		
State		0
Private		0
Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	12,527
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		12,527


OLD
ATCHISON
Bagdad
PIPELINE
262
NATIONAL
TOPEKA
AND
TRAIL
SANTA
FE
36
31
36
31
Landing Strip
T6N
T5N
Amboy
HIGHWAY
194
1
6
6
Amboy Crater
203
AMBOY
TWENTYNINE PALMS
DRY LAKE
LAVA
LAVA
BRISTOL
Salt Evaporators
188
MARINE
36
31
36
31
181
T5N
T4N
205
1
6
6
ROAD
LAKE
CORPS
198
294
America Mine
586
BASE
R10E
R11E
R11E
R12E
NONE
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES

Amboy Crater Proposal
MAP-1

CDCA-304A
JUNE, 1988

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: There are numerous vehicle ways and paths on the crater and lava flows. Tank tracks are scattered randomly throughout the WSA. Section 34 in the northwest corner of the WSA has been utilized as a mineral materials source. However, when viewed as a whole, the area has been affected primarily by natural forces.

2. Solitude: Opportunities for solitude are diminished by the busy nature of the WSA's surroundings, and its lack of topographic and vegetative screening. Salt mining and hauling activity on the east, operations at the America Mine to the southeast, and traffic on the National Trails Highway (formerly U.S. Route 66) and railroad to the north are all audible and visible within the adjacent portions of the WSA.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: Opportunities for primitive recreation exist within the WSA, although the quality is reduced somewhat by the area's lack of solitude.

4. Special Features: The most significant feature in the WSA is Amboy Crater itself, one of a series of volcanic cones between Barstow and Amboy. Only the western half of the crater is within the WSA. The other half was excluded from the study area because it was in private ownership, though it has since been acquired by the United States. It is not known when Amboy Crater last erupted; estimates range from 6,000 years to 500 years ago. Geologists believe that there may have been a series of eruptions. The cone rises some 200 feet above the surrounding lava flows and is 10 to 30 feet thick. A number of volcanic features can be seen here. These include basaltic black lava, pahoehoe (smooth, ropy-surfaced lava), cinders, and bombs from the crater. The extensive lava flows contained huge bubbles of gas. When the lava cooled many of these split, forming chambers, and in some cases, tunnels. Occasionally, the older desert alluvium that was covered by the lava flow can be seen at the bottom of these blisters.

   Much of the WSA was used prehistorically for both sacred and seasonal collecting purposes. Known archaeological sites include temporary camps, stone tool manufacturing areas, and pottery fragments. Temporary camps associated with salt procurement occur along the shores of Bristol Dry lake. Amboy Crater continues to be significant to modern Native Americans. The crater is part of the Mohave oral traditions of creation and preservation.

B. Diversity in the National Wilderness Preservation System (NWPS)

1. Assessing the diversity of natural systems and features as represented by ecosystems: The WSA contains 12,527 acres of the American Desert/Creosote bush (*Larrea*) ecosystem. This province is ubiquitous in the California desert and is currently represented in areas recommended for the NWPS.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas		Other BLM Studies	
	areas	acres	areas	acres
	NATIONWIDE			
American Desert/Creosote Bush	1	343,753	117	4,255,382
	CALIFORNIA			
American Desert/Creosote Bush	1	343,753	88	3,641,578

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of eight major population centers. Table 3 summarizes the number and acreage of wilderness areas and other BLM study areas within a five-hour drive of these population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas		Other BLM Studies	
	areas	acres	areas	acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Bakersfield	32	4,071,358	128	3,998,548
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Oxnard-Ventura	23	2,195,198	85	2,703,260
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Visalia-Tulare-Porterville	34	4,431,635	61	1,681,921
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The closest designated wilderness is 15 miles south in Joshua Tree National Monument, which is managed by the National Park Service. Within 50 air miles of the Amboy Crater WSA are 15 BLM study areas recommended for wilderness designation, all of them within the California Desert Conservation Area.

C. Manageability

The Amboy Crater WSA is manageable as wilderness. However, it will be difficult to protect wilderness values, and particularly to ensure opportunities for solitude. Also, if left unresolved, another factor would severely complicate manageability: the WSA directly borders a paved highway.

The WSA is in a busy area where opportunities for solitude are already constrained by outside sights and sounds of mining, vehicle, and railway traffic. All of these activities would continue to disrupt solitude were the WSA to be designated wilderness.

The WSA's narrow shape, with eight linear miles only one and one-half to two and three-quarter miles wide, makes acquisition of private inholdings a necessity. Otherwise, future developments on the private property could reduce naturalness and opportunities for solitude to the point where the vestigal area exhibiting wilderness characteristics is effectively split into several units.

On the north, the WSA borders directly on the National Trails Highway. Since there is no longer a right-of-way on record, the WSA boundary is the edge of the paved surface. However, San Bernardino County continues to maintain the route.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Amboy Crater WSA is located in the BLM Bristol Lake Geology-Energy-Mineral (G-E-M) Resource Area (GRA). The WSA's mineral resources had not been fully analyzed, integrated, and interpreted at the time of the recommendation process in 1980. However, the CDCA Plan EIS did indicate that the WSA had potential for cinders, geothermal energy, sodium, calcium, and strontium. A block of 131 unpatented mining claims extended into the south-central portion of the WSA in 1980. No mineral deposits in the WSA were known to be in production at the time of the recommendation process.

   Additional data in the 1980 BLM GRA file indicated that the area had potential for the occurrence of uranium, lithium, and industrial materials. The Bristol Lake salt evaporation ponds lie two to three miles east of the WSA. This area had been classified as a Known Leasing Area for sodium by the U.S. Geological Survey (USGS) in 1978. Due to the proximity of the WSA to the operations at Bristol Lake, the WSA is within an area classified by the GRA as having a moderate potential for sodium minerals. In addition, the area was classified as having a moderate potential for the occurrence of lithium based on favorable geology and similar mineral environments to lithium operations in saline environments (e.g., Searles Lake).

   A small portion of the WSA in the upper northeastern corner was classified in the GRA file as having a moderate potential for the occurrence of uranium minerals. The uranium potential is based on an airborne gamma-ray anomaly and a favorable geologic and mineral environment.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Recommendation: No USGS or U.S. Bureau of Mines mineral surveys were conducted in the WSA because it is recommended nonsuitable for wilderness designation.

   Although the GRA classified the northeastern portion of the WSA as having a moderate potential for the occurrence of uranium, the favorable environment for uranium is limited to more acidic volcanic rocks than are found in the WSA (Cox, Dennis P., Singer, Donald A., 1986, Descriptive model of volcanogenetic U in Mineral Deposit

Models, USGS, Bulletin 1693, pg. 162, 163). The volcanic rocks in the WSA are composed of more basic rocks such as basalt. No uranium has been mined in the WSA, and there has not been any interest in exploration for this commodity in the WSA. Based on this data, the area is considered as having a low potential for the occurrence of uranium in the WSA, a down-grade from the 1980 GRA moderate classification.

The western boundary of Bristol Dry Lake bed is avoided by the eastern boundary of this WSA, thus excluding the favorable geologic environment supporting the 1980 GRA moderate potential classifications for sodium, calcium, strontium, and lithium evaporite minerals. Under the BLM classification system, the WSA is considered as having a low potential for occurrence of these minerals.

Cinders are known to occur in the north half of the WSA in a favorable environment for these resources. Under the BLM classification system and based on the abundance of basaltic rock and cinders surrounding Amboy Crater, the north half of the WSA is indicated on Map 2 as having a high occurrence potential for volcanic cinders.

A map by Majmundar (1983, Technical Map of the Geothermal Resources of California, California Division of Mines and Geology, scale 1:750,000) shows the WSA to be in an area with potential for the occurrence of geothermal energy resources. The geothermal potential of this WSA is untested and unexplored. There has been no interest shown in this area since the preliminary wilderness recommendations in 1980; therefore the occurrence potential is considered to be low under the BLM classification system.

There have been no plans of operation submitted with the BLM for either exploration or mining in this WSA. In February 1988, a small exploration partnership expressed interest in removing cinders adjacent to the eastern boundary of the WSA in order to process them for precious metals.

As of December 1987, there were 12 placer claims within the WSA, encumbering a total of 480 acres, recorded with BLM (Table 4). Ten of these claims are on volcanic cinder terrain surrounding Amboy Crater in the northern part of the WSA. Two of the placer claims surround Bristol Dry Lake in the central part of the WSA.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	N/A	0	0	N/A	0	0
Placer	N/A	12	12	N/A	480	480
Mill Site	N/A	0	0	N/A	0	0
Total	N/A	12	12	N/A	480	480

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Naturalness and opportunities for solitude will decline slightly over the long term as a result of mining and common variety mineral material extraction, and continuing OHV recreation. Outside influences will continue to disrupt solitude as they do at present.

2. Impact on Native American Values: Sacred features will be protected under the American Indian Religious Freedom Act. Any changes in physical appearance or use of sacred sites will be made only with consultation with the affected Native American group.

3. Impact on Cultural Resources: All proposed surface-disturbing activities will be subjected to environmental analysis to allow the detection and salvage of any resources. Some sites may be unintentionally damaged by casual OHV use.

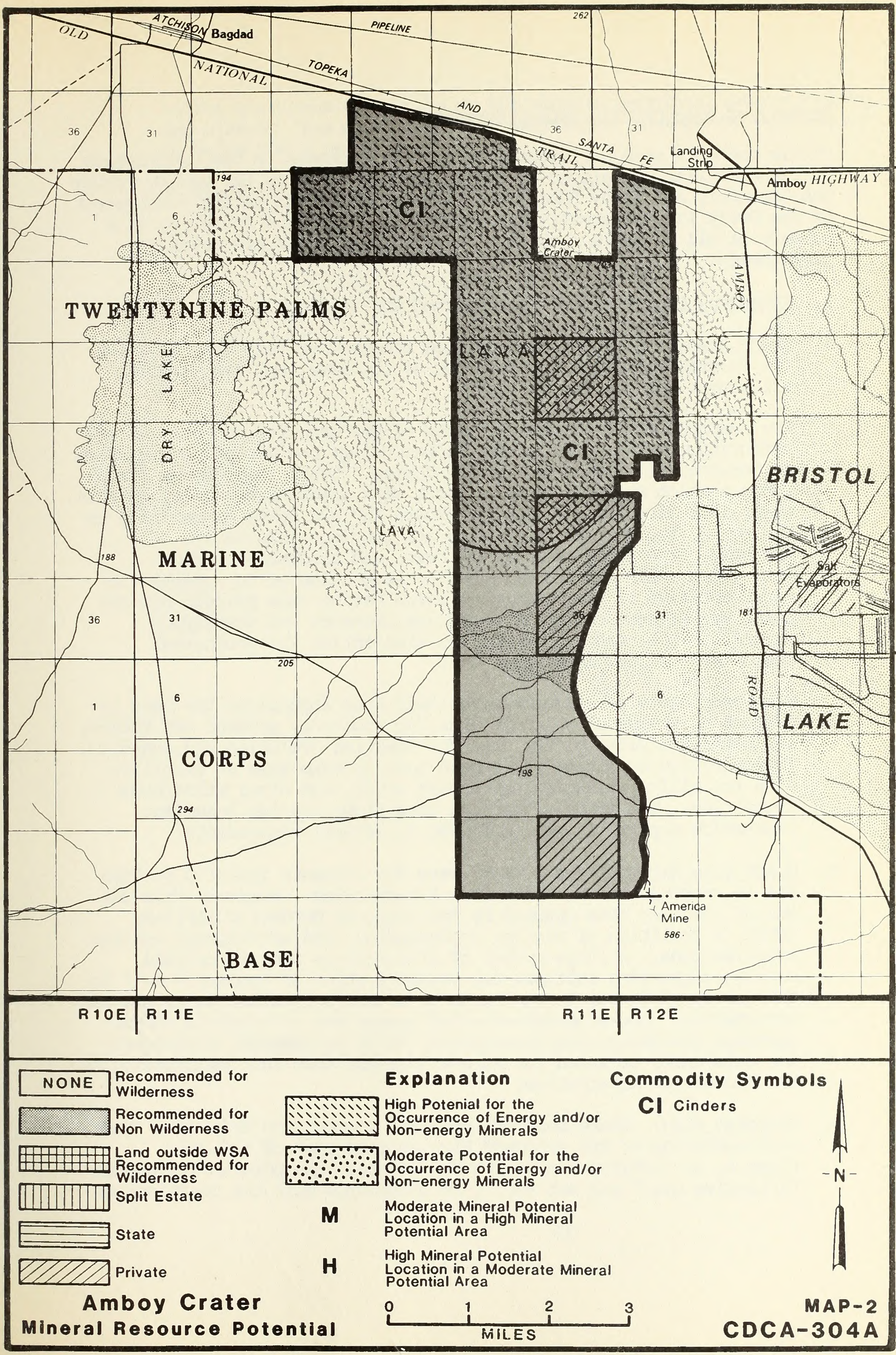
4. Impact on the Value of Amboy Crater as a Geological Teaching and Research Site: Although the site's value will be slightly reduced when the crater and surrounding area are disturbed by cinder removal operations, 50 miles north, the Cinder Cones WSA will preserve in its natural state a similar example of volcanic phenomena.

5. Impact on Motorized Recreation: The proposed action will have no impact. All routes currently approved for motorized use will continue to be accessible.

6. Impact on Leasable Mineral Extraction: The proposed action will have no impact. The WSA will be available for exploration and development, consistent with applicable laws and regulations and CDCA Plan guidelines.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.


OLD NATIONAL TRAIL HIGHWAY
ATCHISON TOPEKA AND SANTA FE
PIPELINE
Bagdad
262
Landing Strip
Amboy
T6N
T5N
T4N
36
31
1
6
194
CI
Amboy Crater
AMBOY ROAD
TWENTYNINE PALMS
MARINE
CORPS
BASE
DRY LAKE
LAVA
BRISTOL
LAKE
Salt Evaporators
188
205
198
181
294
America Mine
586
R10E
R11E
R12E
NONE Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
CI Cinders
N
0 1 2 3
MILES

Amboy Crater
Mineral Resource Potential

MAP-2
CDCA-304A

G. Summary of WSA-Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Known inaccuracies are noted in parentheses.

1. Inventory Phase: Comments supported the findings.

2. Study Phase: Sixteen comments were received on this WSA, of which ten favored continual multiple use of the area, and six favored wilderness designation.

   Two respondents mentioned the value of the area for educational and scientific uses as well as for rockhounding; one wanted to establish an "ecological study area" at the crater. Other respondents listed factors which they believed conflict with wilderness quality in this unit, including the old highway "Route 66" and Santa Fe railroad to the north, the town of Amboy with its landing field to the northeast, the Amboy road to the east, and unidentified human activities which are not screened by vegetation or topography. A representative of the Twentynine Palms Marine Base pointed out the noise and tremors caused by exploding ordnance and overflying aircraft. The need for access for exploration for geothermal resources was also mentioned.

   Most proponents of wilderness for this area emphasized the need to protect this unusual volcanic area for students, present and future, and noted the value of the area for teaching evolution and adaption. The primitive condition and rugged terrain make this an excellent area for hiking, backpacking, nature study, and other wilderness recreation. The Amboy Crater and lava flows provide beautiful recreation opportunities, according to several respondents.

3. Draft Plan Alternatives: There were few comments specific to this WSA in response to the Draft Plan Alternatives. However, this was one of the many WSAs opposed by the National Outdoor Coalition (NOC), a coalition of mining, rockhounding, and off-highway vehicle organizations. A large number of club members sent in printed coupons supporting multiple use classification of "moderate use" for this area. This was in agreement with the recommendation of the Use Alternative. Conservation-oriented groups and individuals either approved the Protection Alternative, which recommended wilderness for this unit, or asked for more wilderness than that recommended by the Protection Alternative.

4. Proposed Plan: There were few specific comments on this WSA. The recommendation of the Proposed Plan to make most of the unit Class L, or "limited use," with the Bristol Lake portion designated "intensive use," was not wholly in accordance with the positions of

either the conservationists or the vehicle dependent recreationists and miners. The area was not of sufficient interest to the public to bring out a letter campaign.

No comments were received from local governments.

Sheephole/Cadiz

CDCA 305

SHEEPHOLE/CADIZ WILDERNESS STUDY AREA (WSA)

(CDCA-305)

1. THE STUDY AREA --- 186,859 acres

The Sheephole/Cadiz WSA is in southern San Bernardino County, in the south-central portion of the California Desert Conservation Area (CDCA). The nearest community is Twentynine Palms, California, about 25 miles to the west. The study area consists of 155,069 acres of public land under the jurisdiction of the Bureau of Land Management (BLM), 3,021 acres of State land and private inholdings totaling 28,769 acres (see Map 1 and Table 1).

The WSA is bounded on the south by State Highway 62 (Twentynine Palms Highway). From the southwest corner, the western boundary follows a dirt road north for six miles then generally parallels and remains one mile east of constructed roads north for four miles. At Sheephole Summit, the boundary heads northeast about one-half mile east of, and parallel to, a graded dirt road for 16 miles. Approximately one mile east of the Calumet Mine, the boundary follows Patton's Trail south for fifteen miles. At a point in section 14, T. 1 N., R. 15 E., the boundary bends southwest for approximately one and one-half miles then runs south-southeast again, one and one-half miles west of and parallel to Patton's Trail for approximately five and one-half miles to State Highway 62. The perimeter of the Sheephole/Cadiz WSA totals approximately 85 miles.

The major landmarks in the WSA are the Sheephole Mountains and the Calumet Mountains. Both mountain ranges trend northwest-southeast and occupy about 35% of the WSA. The remainder of the WSA encompasses two broad desert valleys; Sheephole Valley, which separates the Sheephole Mountains and the Calumet Mountains, and Cadiz Valley, a sandy and sparsely vegetated valley to the east of the Calumet Mountains. Low sand dunes occupy the southwestern corner of the WSA. The Sheephole Mountains are a steep, boulder-strewn, granitic mountain mass and are the higher of the two mountain ranges. The Calumet Mountains are also granitic, fairly steep, but not nearly as boulder-strewn as the Sheepholes. The Calumet Mountains rise to 3,723 feet above sea level, some 2,000 feet above their base. The highest point in the Sheephole Mountains is 4,613 feet above sea level and represents about a 2,500-foot ascent from Sheephole Valley. The study area possesses several unique varieties of plants and animals, as explained in the Special Features section.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EISs) for the CDCA Plan: protection, use, balanced, and no action; a summary of the area's wilderness values was included in Appendix III of the Final EIS. Three different suitability recommendations were analyzed in the EISs: all wilderness, no wilderness, and 98 percent suitable partial suitable wilderness.

2. RECOMMENDATION AND RATIONALE ---

0	acres recommended for wilderness
155,069	BLM acres recommended for nonwilderness

No wilderness is the recommendation for the Sheephole/Cadiz WSA. The entire acreage in this WSA is released for uses other than wilderness. This recommendation was incorporated into the CDCA Plan as a 1982 plan amendment. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The no-wilderness recommendation is based on the following rationale: (1) the WSA does not contain any noteworthy special features and would not contribute to the diversity of the National Wilderness Preservation System; (2) the WSA's wilderness values are outweighed by its potential for energy and mineral resources; (3) manageability as wilderness is complicated by the presence of widely scattered non-Federal inholdings; and (4) there is almost no demand for primitive recreation opportunities within this WSA.

The Sheephole/Cadiz WSA contains no unusual features or resources, and is merely an area of undeveloped public land. Designation of this area as wilderness would not contribute to the diversity of the National Wilderness Preservation System and is ecologically similar to other areas identified for wilderness designation. Within 50 miles are ten other BLM study areas recommended for addition to the National Wilderness Preservation System (NWPS). Many of these ten areas display the same ecosystem and landforms as this WSA, and also contain notable special features of scientific and general sightseeing interest.

Significant portions of this WSA have moderate potential for a variety of mineral resources. The area contains 91 mining claims that encumber an estimated 3,480 acres of the WSA.

In addition, 17% of the WSA is non-Federal land, which are widely scattered in a checkerboard pattern over the northern two-thirds of the study area. This situation makes it likely that uses incompatible with wilderness management will occur sometime in the future. The Consolidated General Plan of San Bernardino County classifies the parcels for Rural Conservation. The minimum allowable acreage is 40 per parcel except on parcels which existed prior to 1979. Based upon a 40-acre figure as average, under current County guidelines it would be possible to create nearly 800 separate parcels for residential, commercial and industrial use within the WSA.

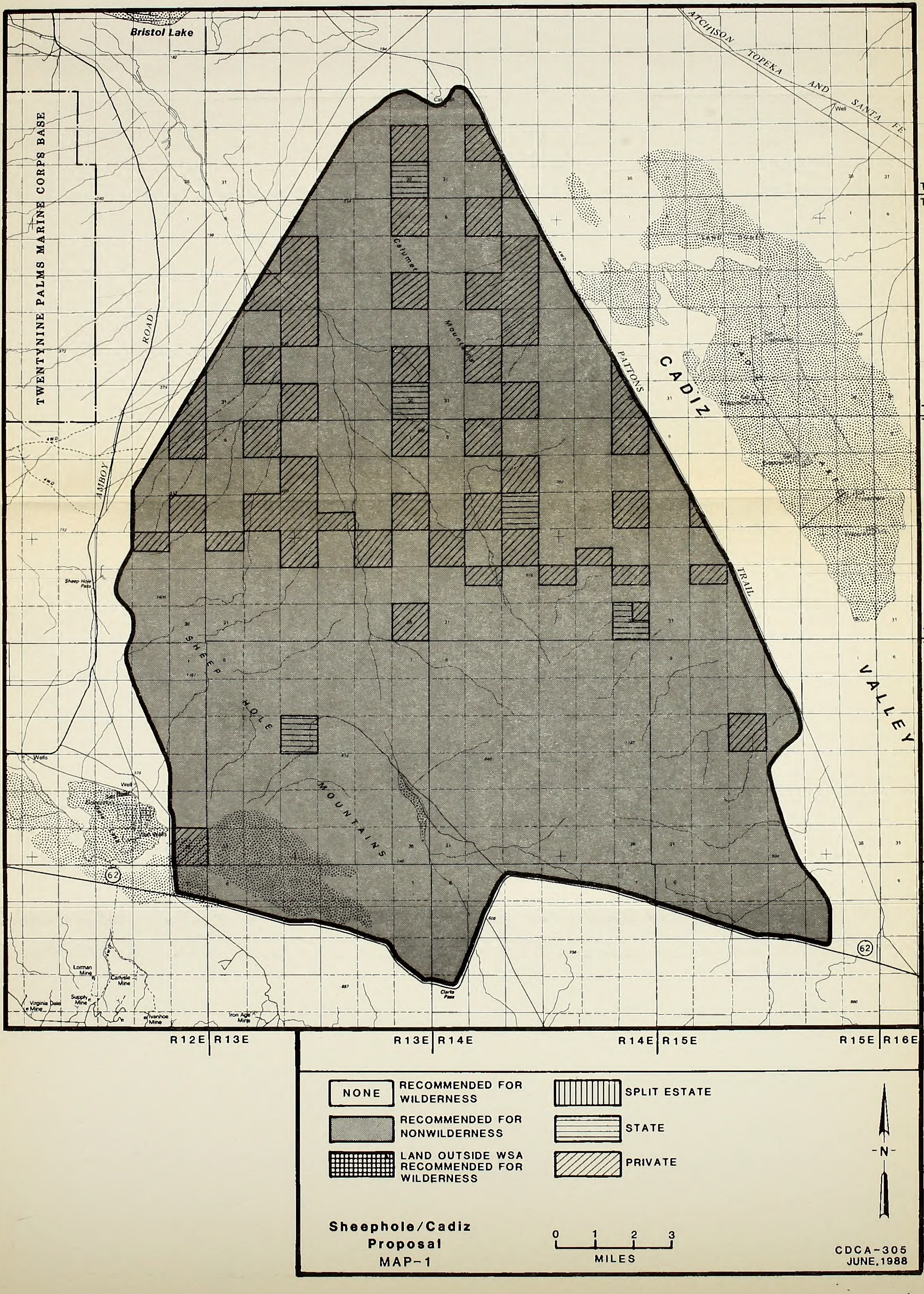
There are approximately 11.5 miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use. The WSA receives low recreation use of less than 200 visitor-use days annually, which is almost exclusively motorized use for rockhounding, hunting, and target shooting. Demand for primitive recreation opportunities in this WSA is virtually nonexistent. The area receives little use presumably because there is little to attract visitors, who are drawn instead to the other nearby areas containing a wealth of special features.

Following its release from wilderness consideration, the Sheephole/Cadiz WSA will be managed according to the guidelines for low-intensity use as outlined in the California Desert Plan. This prescription will protect botanical and wildlife resources while permitting controlled access for mineral and energy exploration and development.

All wilderness is the environmentally preferable alternative because it would result in the least change to the existing natural environment over the long-term. It is not the recommendation for this WSA, however, for the reasons discussed above.

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	155,069
Split Estate	(BLM surface only)	0
Inholdings		
State		3,021
Private		28,769
Total		186,859
Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	0
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		0
Inholdings		
State		0
Private		0
Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	155,069
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		155,069


Bristol Lake
ATCHISON TOPEKA AND SANTA FE
TWENTYNINE PALMS MARINE CORPS BASE
AMBOY ROAD
Calumet Mountains
PATTONS TRAIL
CADIZ VALLEY
SAND DUNES
CADIZ LAKE
SHEEP HOLE MOUNTAINS
Sheep Hole Pass
Clarks Pass
Wells
Well
Lorman Mine
Carlysle Mine
Supply Mine
Virginia Dale Mine
Ivanhoe Mine
Iron Age Mine
62
4WD
T4N
T3N
T2N
T1N
T1S
R12E R13E
R13E R14E
R14E R15E
R15E R16E
NONE RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0 1 2 3
MILES

Sheephole/Cadiz Proposal
MAP-1

CDCA-305
JUNE, 1988

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The area has been affected primarily by natural forces with man's imprint substantially unnoticeable. The only signs of man's presence are occasional mining claim markers and a loose network of old mining access routes, most of which follow drainage courses but which occasionally cross over intervening ridges to connect with other washes. Routes located in washes are subject to flash flooding, which erases their evidence on a regular basis. Connecting routes appear to be slowly falling into an unusable condition and over time will not be noticeable to the uninformed visitor.

2. Solitude: Opportunities for solitude are available within the WSA. The area's irregular topography, particularly in the Sheephole Mountains, helps to screen views and to isolate visitors.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: Opportunities for hiking and nature study are enhanced by the lack of any noticeable man-made intrusions.

4. Special Features: In November 1984, the California Department of Fish and Game transplanted 11 bighorn sheep into the Sheephole Mountains, followed by an additional 16 in July 1985, to supplement the small native population of 12 animals. There is one permanent spring and a big game guzzler in the Sheephole Mountains.

   The desert tortoise, under status review by the U.S. Fish and Wildlife Service (USF&WS) for possible listing as a threatened or endangered species, occurs in densities of up to 50 per square mile in portions of Sheephole and Cadiz Valleys.

   No unusual plant assemblages occur in this WSA. Alverson's pincushion cactus (*Coryphantha vivipara* var. *alversonii*), under status review by the USF&WS for possible listing as threatened or endangered, is reported to occur along the northwest boundary of the WSA. Borrego milkvetch (*Astragalus lentiginosus* var. *borreganus*) occurs in the sand dunes and is listed by the California Native Plant Society as rare and endangered in California.

Approximately 12 square miles in the northern part of the Sheephole Mountains is a well-documented traditional collection and hunting area for the Twentynine Palms Band of the Chemehuevi and southern Shoshone Indians.

B. Diversity in the National Wilderness Preservation System

1. Assessing the diversity of natural systems and features as represented by ecosystems: The WSA contains 155,069 acres of the American Desert/Creosote Bush (Larrea) ecosystem. This ecosystem is widespread throughout the California Desert and is currently represented by other WSAs that are recommended suitable for wilderness designation.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas areas	NWPS Areas acres	Other BLM Studies areas	Other BLM Studies acres
	NATIONWIDE			
American Desert/Creosote Bush	1	343,753	117	4,112,840
	CALIFORNIA			
American Desert/Creosote Bush	1	343,753	88	3,499,036

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of eight major population centers. Table 3 summarizes the number and acreage of wilderness areas and other BLM study areas within a five-hour drive of these population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas		Other BLM Studies	
	areas	acres	areas	acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Bakersfield	32	4,071,358	128	3,998,548
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Oxnard-Ventura	23	2,195,198	85	2,703,260
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The closest designated wilderness is five miles south in Joshua Tree National Monument, which is managed by the National Park Service. Within 50 air miles of the Sheephole-Cadiz WSA are ten BLM study areas recommended for wilderness designation.

C. Manageability

The Sheephole/Cadiz WSA is manageable as wilderness. However, maintenance of wilderness values cannot be assured without acquisition of the non-Federal inholdings, which make up 17 percent of the WSA's total acreage. These non-Federal lands occur throughout in the northern two-thirds of the study area, and are widely scattered in a checkerboard pattern. The potential for nearly 800 private parcels and necessities for access, cause a significant manageability problem.

Wilderness management would require extensive posting to delineate the entire west and north boundaries, and the southern eight miles of the east boundary, which are not aligned with any recognizable physical feature.

Presently, one bighorn sheep guzzler is located within the WSA. Maintenance is required approximately two times per year and normally requires mechanized equipment and vehicles for transportation of materials to the site.

Wilderness manageability could be enhanced through acquisition of the valid existing rights, which, when coupled with acquisition of non-Federal lands, would ensure that wilderness values could be permanently protected and maintained at their existing level. Significant portions of the wilderness study area have moderate potential for gold, iron, molybdenum, silver, and saline minerals (see Energy and Mineral Resource Values). The WSA has 91 mining claims. In view of the identified mineral potential, it is likely that some of these claims would withstand a validity examination, making their development possible. To assure the long-term protection of wilderness values, it would become necessary to acquire the valid mineral rights.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Sheephole/Cadiz WSA is in the BLM Bristol Lake Geology-Energy-Minerals G-E-M Resource Area (GRA). Existing mineral resource data for this WSA had not been fully analyzed, integrated, and interpreted at the time the wilderness recommendation was made. However, potential was recognized for metals and uranium in the Sheephole and Calumet Mountains, and for sodium in Dale Lake. There were 14 unpatented mining claims in this WSA on December 12, 1979.

   Although no BLM classification was prepared, data in the 1980 BLM GRA file indicated that the area had known occurrences of gold and silver. Favorable areas were identified for the occurrence of uranium (based on gamma ray spectroscopy), sand, gravel, industrial minerals, iron, and sodium.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Recommendation: In 1982, the U.S. Bureau of Mines (BOM) and U.S. Geological Survey (USGS) published results of their mineral surveys for this WSA; as Mineral Land Assessment 110-82 (BOM) and Open-File Report 82-957, (USGS and BOM). These reports generally supported BLM's earlier assessments and identified 28 unpatented placer and 37 unpatented lode mining claims within and contiguous to the WSA. Mining since 1917 had been largely confined to small hydrothermal gold deposits at the Aljac, Big Horn, and Sheep Hole mines, but there were no substantive production records available. Although there were no producing mines at the time of their survey, the two agencies identified low to moderate potential areas for gold, silver, copper, molybdenum, decorative stone, and geothermal resources, and undefined (speculative) potential for saline minerals

and oil and gas. Areas identified as having a moderate or high potential for the occurrence of mineral resources using the BLM classification scheme, and based on the USGS/BOM mineral survey reports, are shown on Map 2.

Placer mining claims are located within the south and western portions of the WSA. Lode mining claims are located in the northern portion of the WSA. Unpatented mining claims located within the WSA are summarized in the following table taken from BLM records dated December 1987.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	N/A	8	8	N/A	160	160
Placer	N/A	83	83	N/A	3,320	3,320
Mill Site	N/A	0	0	N/A	0	0
Total	N/A	91	91	N/A	3,480	3,480

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Wilderness values will decline over the long-term as exploration and development occurs in areas of moderate mineral potential, in areas used for off-highway vehicle (OHV) recreation, and on private lands within the WSA developed for residential or commercial purposes. Opportunities for solitude will be diminished on public land adjacent to the private inholdings which may be developed. Wilderness values will be retained in the portions of the WSA not influenced by these uses.

2. Impact on Bighorn Sheep Reintroduction Efforts: No impact. Motorized vehicles can continue to be used in sheep transplants and water maintenance activities.

3. Impact on Species under Federal Status Review for Possible Listing as Threatened or Endangered: Future planned actions will be subject to environmental analysis to identify any potential impacts to desert tortoise or Alverson's pincushion cactus, allowing development and implementation of appropriate mitigation measures.

4. Impact on Mineral Exploration and Development: The proposed action will have no impact. Further exploration, as well as development of the 91 existing claims, can proceed subject to existing laws and regulations and guidelines defined in the CDCA Plan.

5. Impact on Native American Uses: Native American access to traditional hunting areas and collection sites will be retained.

6. Impact on Private Lands Development: Private lands will be able to be developed according to local jurisdictional discretion. Access will be allowed according to BLM policy.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA-Specific Public Comments

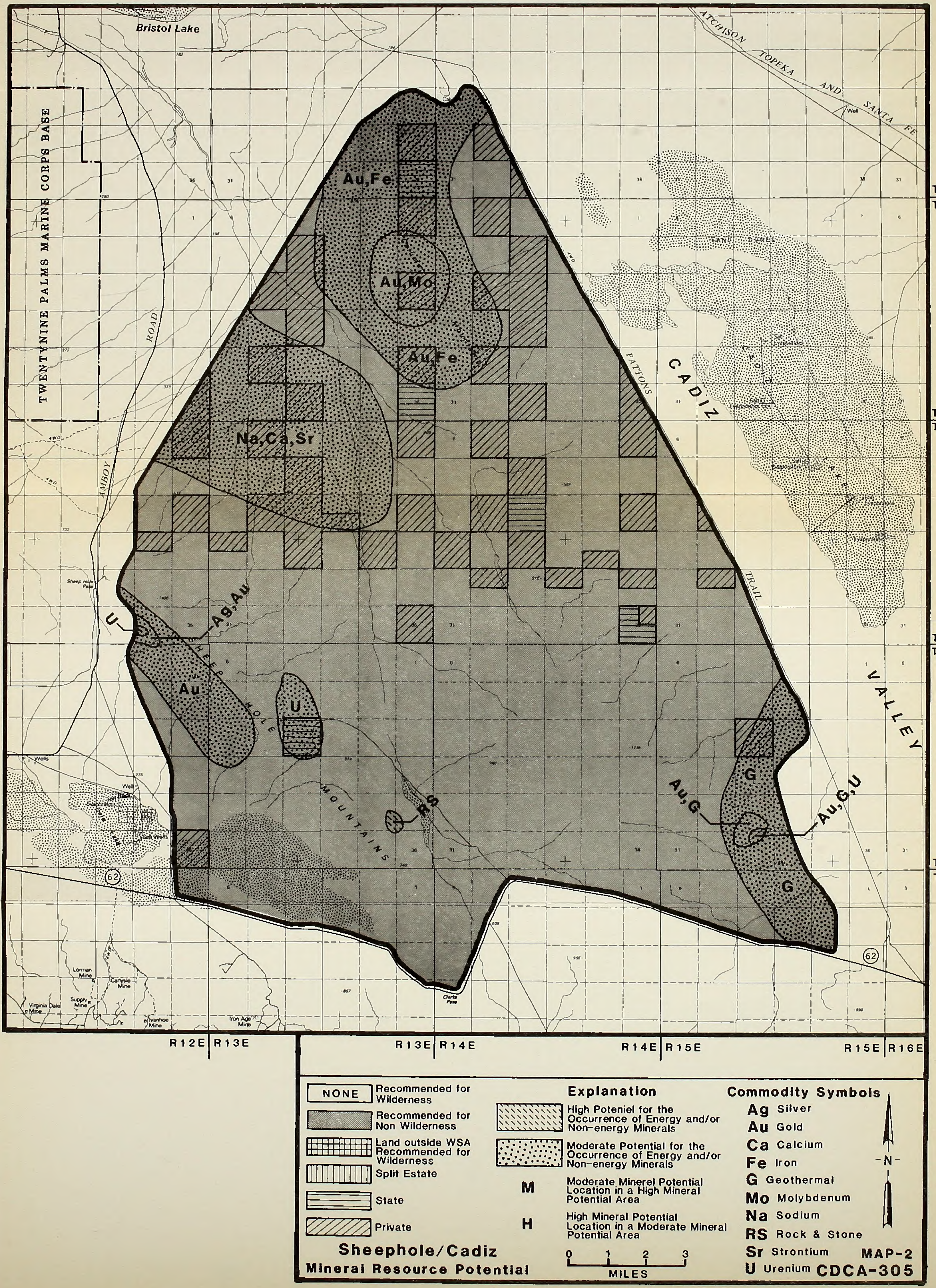
Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Known inaccuracies are noted in parentheses.

1. Inventory Phase: A large number of comments indicated that the wilderness study area should be expanded. Other comments referred to access routes into this area which was shown as having wilderness values. No changes were made in the findings as a result of these comments.

2. Study Phase: Ninety-one written comments were received on this WSA. Sixty-nine favored further wilderness study for the area; most of the letters (64) addressed the excluded eastern portion of the WSA. This area, which contains Cadiz Valley, Ward Valley and Iron Mountain, was described as breathtaking, extremely striking, vast, beautiful, and a Sahara-like scenery unique in the desert. Features which were said to be rare and in need of wilderness protection included: the sand dunes area which has potential scientific value as an unstudied stable and active dune system; unique endemic species of insects, a land snail, and several plant communities; and two dry lake beds which provide short-term habitat for water birds after heavy rainfall.

   Respondents felt that deletion of the eastern portion of this WSA was due to BLM bias against low-profile topography and broad valley floors in the wilderness inventory. One noted that a viewer can experience the vastness of desert lands from a flat area where topography does not preclude views many miles distant. This contrasted with the view of a respondent who opposed wilderness for this area because it contains no natural features.

   Wilderness proponents further stated that they agreed with deleting certain portions of the eastern half because of human impacts, but that the entire area should not be excluded. They said that boundaries could be set to eliminate the salt mine, pumping plants, and transmission lines. Motorized vehicle scars on the valley floor could be rehabilitated. Many urged that the area not be opened to off-highway vehicle activity.


Bristol Lake
TWENTYNINE PALMS MARINE CORPS BASE
ATCHISON TOPEKA AND SANTA FE
Well
AMBOY ROAD
PATTONS TRAIL
CADIZ
CADIZ LAKE
SAND DUNES
VALLEY
SHEEP HOLE MOUNTAINS
Sheep Hole Pass
Clarks Pass
Wells
Lorman Mine
Carlysle Mine
Supply Mine
Virginia Dale Mine
Iron Age Mine
Ivanhoe Mine
62
T4N
T3N
T2N
T1N
T1S
R12E
R13E
R14E
R15E
R16E
Au,Fe
Au,Mo
Na,Ca,Sr
Ag,Au
U
Au
RS
G
Au,G
Au,G,U
NONE
Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Poteniel for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M
Moderate Minerel Potential Location in a High Mineral Potential Area
H
High Mineral Potential Location in a Moderate Mineral Potential Area
0 1 2 3
MILES
Commodity Symbols
Ag Silver
Au Gold
Ca Calcium
Fe Iron
G Geothermal
Mo Molybdenum
Na Sodium
RS Rock & Stone
Sr Strontium
U Urenium
-N-

Sheephole/Cadiz
Mineral Resource Potential

MAP-2
CDCA-305

The western portion of this WSA was praised for its reptile and bird life, clean air, scenic vistas, wildflower displays, and even for streams which flow in the springtime. Both the western and eastern part of the WSA were said to provide outstanding opportunities for solitude and primitive recreation.

Twenty-two respondents favored multiple use rather than wilderness for this WSA. Several noted that the area lends itself to unlimited motorized vehicle use, driving for pleasure, and dune buggy riding. General family-type recreation (wildlife study, photography, trail riding, camping, rockhounding, etc.) is available to the vehicle-oriented recreationist. In addition, enjoyment of the educational and scientific values in the western half, including feldspar phenocyst in Sheephole Pass, requires access.

Characteristics of the area which were said to detract from its wilderness quality were the following: the proximity of the Twentynine Palms Marine Corps Base; the lack of outstanding natural features; evidence of mining activities; and the sights and sounds of the nearby railroad, Amboy Road, and some wood-pole powerlines. The checkerboard private land holdings in the northern part of the area were also listed as non-compatible. Energy interests noted that this area has potential for oil, gas, and geothermal resources, which could not be developed if the area were designated wilderness. A power company stated the need for future installation of communications facilities at Iron Mountain and requested that this area be deleted from the WSA.

Twenty-two comments were received in response to the Public Input Workbook (3/15/79). All of them favored wilderness designation and supported the need for recreation, education, and preservation. They all recommended that the eastern portion of the area (Cadiz and Ward Valleys and Iron Mountain) be included as wilderness.

3. Draft Plan Alternatives: Few comments specific to this WSA were received in response to the Draft Plan Alternatives. This was one of the many WSAs opposed by the National Outdoor Coalition (NOC), a coalition of mining, rockhounding, and off-highway vehicle groups. A large number of club members sent in coupons supporting the recommendation of NOC to designate the entire WSA as Class I, intensive use, a position which was not in agreement with any of the alternatives. Conservation-minded individuals and organizations preferred the Protection Alternatives which recommended Class C, or wilderness, for this WSA. One specific comment recommended that the area be left for exploration for oil, gas, and geothermal resources.

4. Proposed Plan: There were few specific comments on this WSA in response to the Proposed Plan, which recommended Class C, or wilderness for most of the study area. The proposal satisfied most wilderness proponents, though some still held out for an expansion

of this WSA to the east. Off-highway vehicle groups and other vehicle-oriented recreationists were displeased with what they perceived to be too much recommended wilderness in the Proposed Plan.

5. 1982 CDCA Plan Amendments: In 1981, a petroleum company proposed an amendment to the Desert Plan to reevaluate the southeast boundary of this WSA to eliminate conflicting uses (graded roads), and change the multiple use class of the deleted portion from C (controlled use) to M (medium use). This proposal was deferred until the 1982 amendment process to allow time for further study and field review.

   In 1982, it was proposed to change the wilderness recommendation from suitable to non suitable for the entire WSA and designate the area Class L (limited use). The amendment was approved.

   The reasons were the large amount of checkerboard land ownership in the northern half, geothermal potential, and interest in locatable minerals. There were 270 comments on the Draft Environmental Impact Statement on this amendment, eight in favor of the change in wilderness recommendation and 262 against it. Proponents for the amendment mentioned the difficulty of managing the checkerboard land pattern and the impact of roads and tank tracks left from military training exercises in the 1940s. Respondents wishing to retain the wilderness recommendation spoke of the vastness and natural wilderness scenery of this large desert valley and flanking mountain ranges. They also noted that the permanent bighorn sheep range at the Sheephole Mountains could be impacted by geothermal development. One respondent suggested joint management of the checkerboard land and exploration of the possibility of land exchange.

   The Final Environmental Impact Statement drew 11 comments, one in favor and ten against the amendment. Reasons were similar to those just listed.

   No comments were received from local governments.

Turtle Mountains

CDCA 307

TURTLE MOUNTAINS WILDERNESS STUDY AREA (WSA)

(CDCA-307)

1. THE STUDY AREA --- 274,997 acres

The Turtle Mountains WSA is just west of U.S. Highway 95 in southeastern San Bernardino County, in the east-central portion of the California Desert Conservation Area (CDCA). The WSA is 60 miles north of the small rural communities of Blythe, California, and 40 miles south of Needles, California. The closest city is Parker, Arizona, approximately 25 miles southeast. The study area consists of 264,272 acres of public land under the jurisdiction of the Bureau of Land Management (BLM), 6,665 acres of State land, and private inholdings totalling 4,060 acres (see Map 1 and Table 1).

Beginning at the northwest corner, the north WSA boundary follows a County-maintained east for about 11-1/2 miles. The boundary then cherrystems a road to a State section and the section itself. Returning to the graded road for a half mile, the boundary leaves it again to skirt a State section, and then dips south to exclude improved dirt roads, structures, and old mine workings in the Carson Well area. The boundary joins the Turtle Mountain Road for about two miles, then follows a primitive way southeast for about 11 miles. Leaving the way, the boundary continues southeast, running cross-country for almost seven miles until it meets U.S. Highway 95. The WSA boundary then follows the edge of the highway right-of-way south for six miles excluding section 36 T. 2 N., R. 22 E. The south boundary follows a primitive way that parallels the Colorado River Aqueduct but which skirts the private property and diversion dikes associated with it. At the southwest corner, the boundary meets another primitive way which it follows north for about eight miles. A large indentation in the WSA's west boundary excludes lands with several ways and other human alterations to the natural environment. The boundary then returns to the way it met at the southwest corner, and follows it north for seven more miles until it meets a telephone line maintenance road. This road forms the final nine miles of the west boundary.

The WSA encompasses a diverse landscape, ranging from broad, open bajadas to highly eroded volcanic peaks, spires, and cliffs. The volcanic formations of the northern Turtle Mountains are colorful, varying from deep reds, browns, tans and grays, to black. The southwest section of the Turtle Mountains has a steep but rounded form. Between the two mountain sections lies a large, flat interior valley bisected by numerous shallow washes. Vegetation is relatively lush on the bajadas which completely surround the mountains.

Several special designations overlie portions of the Turtle Mountains WSA. Mopah Spring and adjacent Mopah Peaks were designated an Area of Critical Environmental Concern (ACEC) in 1980, to protect and recognize the area's significant archeological resources. Much of the Turtle Mountain range has been designated as a National Natural Landmark in recognition of its exceptional natural values. One withdrawal (PLO 5224) for the protection of recreation and public values covers the southeast quarter of Section 28, T. 3 N., R. 21 E.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EISs) for the CDCA Plan: protection, use, balanced, and no action; a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---		
	119,625	acres recommended for wilderness
	147,792	BLM acres recommended for nonwilderness

Forty-four percent partial wilderness is the recommendation for the Turtle Mountains WSA. The 147,792 acres in this WSA recommended nonsuitable are released for uses other than wilderness. In addition to the Federal acreage recommended for wilderness, BLM recommends that 3,134 acres of State land be acquired through exchange or purchase and designated as wilderness along with 11 acres of private lands. With acquisition of these inholdings, a total of 119,625 acres are recommended for wilderness. Appendix 1 lists all inholdings and provides additional information on their acquisition. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The partial-wilderness recommendation is based on the following rationale: (1) the lands recommended for wilderness exhibit exemplary wilderness values; (2) wilderness values are not outstanding on the portion recommended for nonwilderness; (3) the proposed partial wilderness will resolve conflicts between motorized and nonmotorized recreation, providing opportunities for each; and (4) designation of the recommended acreage as wilderness is consistent with previous management over much of the area, and will result in the least displacement of existing uses.

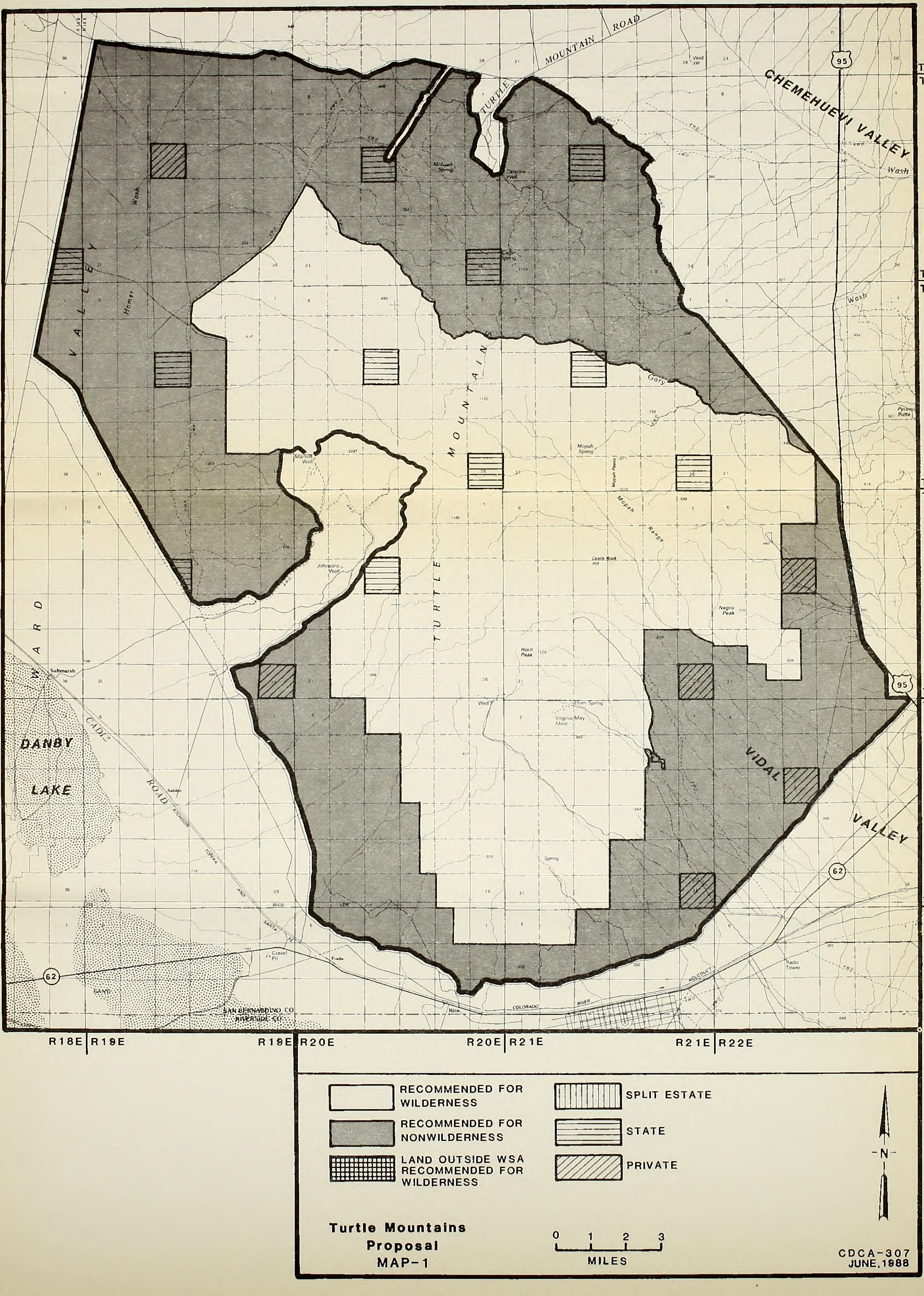
The lands recommended for wilderness possess an outstanding primitive character exemplifying the qualities described in Section 2(c) of the Wilderness Act. The diverse topography and relatively dense vegetation offer visual screening which enhances primitive recreation and creates numerous opportunities for solitude. The steep volcanic and granitic cliffs and spires provide excellent locations for rock climbing. The presence of isolated springs among the canyon walls enhances the area's primitive recreational potential. The Turtle Mountains offer rare opportunities to view such elusive creatures as the desert bighorn sheep and golden eagle in their natural habitat. The opportunities contribute to the area's appeal. Within the Turtle Mountains WSA, "the earth and its community of life are untrammeled by man," and "man is truly a visitor who does not remain."

The suitability recommendation will preclude any further vehicular use of approximately 25 miles of primitive access routes of travel.

Areas recommended nonsuitable for wilderness are primarily located on the plains and bajadas surrounding the Turtle Mountains. Also excluded from the recommended wilderness area is a mountainous region along the northeast boundary of the WSA. These areas have been excluded due to the evidence of man's past activities including mining, military operations, and activity associated with maintenance of the Colorado River Aqueduct.

The WSA has been used for years for both motorized and nonmotorized recreation. The rugged interior terrain has traditionally supported primitive types of recreation. The Mopah Peaks are recognized as a challenge for climbers, and are included on the Sierra Club's list of California Desert Peaks. Motorized vehicle use is popular primarily in the southeast and north portions of the WSA. Photography, off-highway vehicle (OHV) touring, rockhounding, camping, and sightseeing are the primary activities. The greatest demand for rockhounding is in the northern portion of the WSA, in the area to remain nonwilderness. The proposed action will separate motorized and nonmotorized uses, thereby helping to eliminate conflicts between the two. Opportunities for primitive recreation will be enhanced in the interior of the WSA, while motorized activities can continue on the surrounding area.

The central portion of the WSA, including most of the area recommended for wilderness, has been closed to motor vehicle use since 1976. Consequently, recreation use patterns in this area are for the most part compatible with wilderness designation. The public's familiarity with the existing vehicle closure will minimize enforcement problems in the new wilderness area, although some additional vehicle routes will be closed.



MOUNTAIN ROAD
TURTLE
95
T5N
T4N
CHEMEHUEVI VALLEY
Wash
Mohawk Spring
Carsons Well
Coffin Spring
WARD VALLEY
Homer Wash
TURTLE MOUNTAINS
Gary
Pyramid Butte
T4N
T3N
Martins Well
Mopah Spring
Mopah Peaks
Mopah Range
T3N
T2N
Castle Rock
Johnsons Well
Negro Peak
Horn Peak
Saltmarsh
Horn Spring
Virginia May Mine
Well
T2N
T1N
DANBY LAKE
CADIZ ROAD
VIDAL VALLEY
Spring
62
T1N
T1S
Gravel Pit
Freda
Rice
COLORADO RIVER AQUEDUCT
Radio Tower
SAN BERNARDINO CO.
RIVERSIDE CO.
R18E
R19E
R19E
R20E
R20E
R21E
R21E
R22E
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES

Turtle Mountains Proposal MAP-1

CDCA-307
JUNE, 1988

TABLE 1 - Land Status and Acreage Summary of the Study Area

		Acres
Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	264,272
Split Estate	(BLM surface only)	0
Inholdings		
State		6,665
Private		4,060
Total		274,997
Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	116,480
BLM	(outside WSA)	0
Split Estate	(within WSA)[1]	0
Split Estate	(outside WSA)[1]	0
Total BLM Land Recommended for Wilderness		116,480
Inholdings[1]		
State		3,134
Private		11
Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	147,792
Split Estate	(BLM surface only)	0
Total BLM Lands Not Recommended for Wilderness		147,792

---

[1] Appendix 1 is a detailed description of inholdings and split estate tracts included within the study. For purposes of this report, split estate lands are defined only as those lands with Federal surface and non Federal subsurface (minerals). Lands that have Federal minerals but non Federal surface should be classified in this report by the owner of the surface estate.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The area recommended for wilderness appears to have been affected primarily by the forces of nature. Human alterations to the natural environment consist mainly of a few scattered mining prospects, and are substantially unnoticeable within the area as a whole. The fire-charred palms at Mopah Spring have been vandalized by visitors, who have carved their initials in the blackened trunks.

   Within the area recommended for nonwilderness, evidence of previous human activity is more concentrated. Although most claims are now inactive, the ruins of old structures, access roads, and mine tunnels and pits attest to the considerable mining and prospecting activity of the past.

2. Solitude: Within the recommended wilderness area, diverse topography and relatively dense vegetation provide visual screening that enhances a visitor's perception of solitude. Use tends to be concentrated at well-known sites such as Mopah Spring. Throughout the remainder of the area, lack of visitation further accentuates feelings of solitude and isolation.

   In the recommended nonwilderness, evidence of human activity mentioned in the discussion of naturalness somewhat reduces the feeling of remoteness. Also, this area borders directly on well-traveled routes, including U.S Highway 95. Sights and sounds of traffic on these routes reduces the opportunity for solitude on the adjacent portions of the study area.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: Primitive recreation experiences are available throughout the WSA. However, the recommended wilderness presents higher quality opportunities than the recommended nonwilderness, because its superior naturalness and opportunities for solitude enhance the primitive experience.

4. Special Features: Vegetation associated with water sources is classified in the CDCA Plan as highly sensitive Unusual Plant Assemblages (UPAs). A point of special botanical interest is found at Mopah Spring where there is a stand of five mature California fan palms and a clump of four immature palms. Although a species native to the California desert, fan palms generally range further south and did not exist at Mopah Spring until 1924, when they were planted there. While the fan palms of Mopah Spring have been identified as

the northernmost extension of this species, this distinction must be tempered by the fact that they are not native to the Turtle Mountains. No rare, threatened, endangered or sensitive plant species are known to occur in the WSA.

Wildlife of the Turtle Mountains WSA includes the desert bighorn sheep, prairie falcon, and golden eagle, all BLM sensitive species, and the desert tortoise, under status review by the U.S. Fish and Wildlife Service for possible listing as a threatened or endangered species. Several water sources for bighorn sheep have been developed, a cooperative effort between the Bureau of Land Management and the California Department of Fish and Game.

The Turtle Mountains WSA encompasses a region of high cultural resource sensitivity. A total of approximately 30 archaeological sites have been recorded within the range, most of which are associated with springs and seeps. Site types include temporary camps, rock shelters, rock art, rock alignments, tool production stations and quarry sites. Of special significance is the Mopah Springs site near the eastern boundary of the WSA. Here, an extensive array of resources including petroglyphs, trails, trail shrines and markers, and habitation sites occur in a concentrated area less than one-quarter acre in size. In recognition of the significance of the site, the Bureau of Land Management designated the spring and adjacent Mopah Peaks as an Area of Critical Environmental Concern (ACEC) in 1980.

The western part of the Turtle Mountains WSA is an area formerly occupied by the Chemehuevi tribe, for which the Turtle Mountains have ritual significance. A Chemehuevi campsite lies in the middle of the Turtle Mountains in the northeast section of the WSA. A Chemehuevi trail enters the WSA in the northeast and runs adjacent to the entire northern border.

The Turtle Mountains are nationally known to hobbyist rock and mineral collectors as the source of chalcedony deposits known as "Mopah Roses" because of their resemblance to the folded petals of a rose.

B. Diversity in the National Wilderness Preservation System

1. Assessing the diversity of natural systems and features as represented by ecosystems: Two major ecosystems overlap in the Turtle Mountains WSA. This WSA contains 148,590 acres of the American Desert/Creosote Bush-Bur Sage (Larrea-Franseria), and 115,682 acres of the American Desert/Palo Verde-cactus shrub (Cercidium-Opuntia) ecosystems. Because of its position in an ecological transition zone, the WSA contains an unusual diversity of plant and animal species.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas areas	NWPS Areas acres	Other BLM Studies areas	Other BLM Studies acres
NATIONWIDE				
American Desert/Creosote Bush-Bur Sage	3	126,033	48	1,423,067
American Desert/Palo Verde-Cactus Shrub	2	271,403	42	1,429,749
CALIFORNIA				
American Desert/Creosote Bush-Bur Sage	2	26,427	20	828,606
American Desert/Palo Verde-Cactus Shrub	0	0	11	477,770

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of six major population centers. Table 3 summarizes the number and acreage of wilderness areas and other BLM study areas within a five-hour drive of these population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas areas	NWPS areas acres	Other BLM Studies areas	Other BLM Studies acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The closest designated wilderness area is in Joshua Tree National Monument, managed by the National Park Service, approximately 35 miles southwest. Within 50 air miles of the Turtle Mountains WSA are nine other BLM study areas recommended for wilderness designation, eight in the California Desert Conservation Area and one in Arizona's Phoenix District.

C. Manageability

The Turtle Mountains WSA is manageable as wilderness. However, there are differences in the ease of manageability between the recommended wilderness and nonwilderness portions of the study area.

The bulk of the recommended wilderness has been managed as a vehicle closed area since 1976, so the public is already familiar with the exclusion of motor vehicles. The recommended nonwilderness contains a system of primitive ways currently open to motorized use, and which are popular for OHV touring, camping, hunting, and rockhounding access for collecting Mopah roses and other mineral specimens. If this area were to be designated wilderness, an intensive enforcement effort would be required to end this established use.

The recommended wilderness does extend beyond the current vehicle closure, and the south boundary and portions of the east and west boundaries follow unsurveyed section lines rather than physical features. These areas will require more posting than other sections of the boundary to direct recreation users. However, the situation is not unmanageable because visitors generally use one of five routes into the area where the bulk of signing and patrol efforts can be focused.

Approximately 80% of the WSA's 102 mining claims are located within the recommended nonwilderness area. Consequently, the proposed wilderness will minimize the number of validity exams that will be required, and thereby minimize potential conflicts between exercise of valid rights and protection of wilderness values. However, portions of the recommended wilderness have moderate to high potential for gold and silver, making it probable that at least some of the claims within this area would withstand a validity examination, making their development possible within a designated wilderness. Manageability of the recommended wilderness area could be enhanced through acquisition of valid rights. If future mineral development occurs here, naturalness and opportunities for solitude will be reduced.

Within the recommended wilderness area 3,134 acres are owned by the State of California. These lands are in an undeveloped, pristine condition and contain high quality wilderness resources. Acquisition of these lands will enhance the protection of these values and improve the overall manageability of the wilderness area.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

New data not available during the development of the CDCA Plan upgraded the quality of the mineral data regarding the WSA. Map 2 reflects the mineral resource potential of the WSA based on this new data.

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Turtle Mountains WSA is located in the BLM Turtle Mountains Geology-Energy-Mineral (G-E-M) Resource Area (GRA). The mineral resource data for this WSA had not been fully analyzed, integrated, and interpreted at the time the preliminary suitability recommendation was made. The CDCA Plan EIS did indicate, however, that a possible potential for metals, uranium, thorium, oil and gas, perlite, and other industrial minerals exists in the WSA. As of December 12, 1979, there were 22 unpatented mining claims in this WSA.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Recommendation: A BLM executive summary completed in 1982, indicates areas of high to moderate potential exist throughout the WSA for metallic minerals, supporting the EIS statements. The report identifies these metallic minerals as gold and copper with some silver and iron minerals. These high and moderate potential areas are predominately located in the southern, west-central, and extreme northern parts of the Turtle Mountains. Small isolated areas of high to moderate potential areas are mapped at scattered locations around known mining sites. Moderate potential for nonmetallic minerals is indicated in the east-central (Mopah Peaks) area, northwest to the extreme northern part of the WSA. These minerals are identified as perlite and semi-precious stones and are mapped in isolated areas. Although the CDCA Plan EIS indicated a potential for uranium, thorium, and oil and gas, the report showed only a speculative (low) potential for these resources.

   The U.S. Bureau of Mines (BOM) and U.S. Geologic Survey (USGS) conducted mineral surveys of the recommended suitable portion of the WSA. BOM released Mineral Land Assessment (MLA) 6-84 in 1984, and in December 1987, USGS provided a draft preliminary copy of the joint report on the results of the surveys to BLM. The mineral resource potential on Map 2 for the nonsuitable areas reflect the previous BLM classification, whereas the classification of the recommended suitable areas are based on the USGS and BOM findings. The USGS and BOM reports supported BLM's data as it applied to metallic minerals but disagreed on the nonmetallic and energy related minerals.

The USGS report identifies large areas of the suitable area that have a high to moderate potential for gold and silver with by-product recovery of copper, lead, zinc, molybdenum, and tungsten. The report documents the existence of sand and gravel resources but assigned them a low potential due to economic reasons. In a letter dated August 9, 1988 from the Director of the BOM to the Director of the BLM, it is indicated that a large gold reserve exists on property adjacent to the study area. Estimates indicate that 10 million tons of gold ore exists.

The USGS report differed from BLM's assessment in determining that only a low potential exists for manganese, uranium, thorium, perlite, ornamental stone, pegmatite minerals (onyx, beryl), and oil and gas in the recommended suitable portion of the WSA.

Applications for seven oil and gas leases are pending within the recommended suitable (640 acres) and nonsuitable (5,123 acres) western portion of the WSA. BLM was directed not to expend appropriated funds on processing oil and gas leases in WSAs under the appropriation legislation. Unpatented placer and lode mining claims are concentrated in the north-central portion of the recommended nonsuitable area of the WSA.

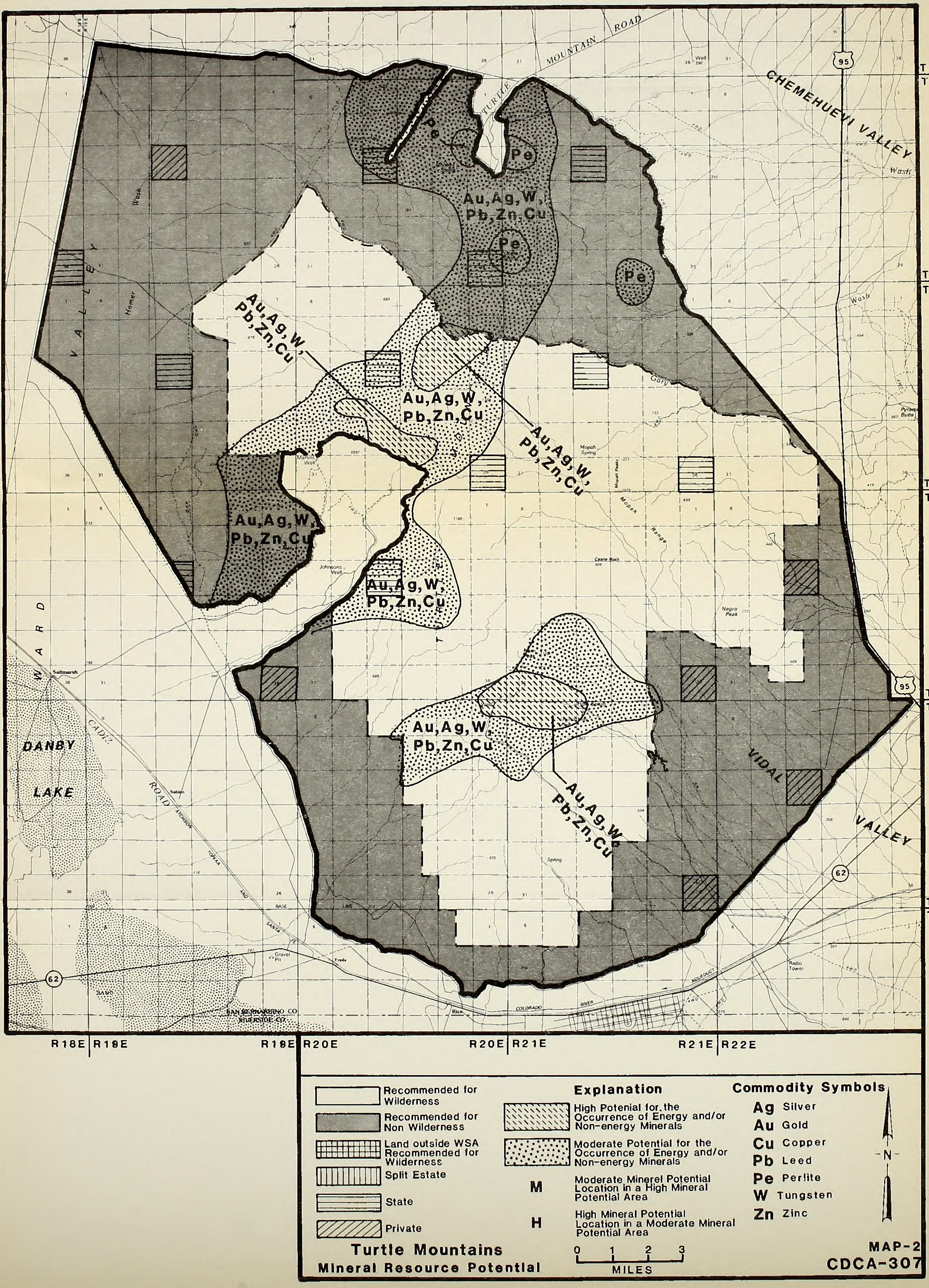
Unpatented lode mining claims are also concentrated in the north-central portion of the recommended suitable area of the WSA. Unpatented mining claims located in the WSA are summarized in the following table taken from BLM records dated December, 1987.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	22	20	42	440	400	880
Placer	0	58	58	0	2,320	2,320
Mill Site	0	2	2	0	10	10
Total	22	80	102	440	2,730	3,170

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: With the exception of potential site-specific adverse impacts caused by mineral development of valid claims, existing high quality wilderness values will be retained on the 44% of the WSA to be designated wilderness. The lower quality wilderness values on the 56% of the WSA will generally be retained at their existing levels, with the following exceptions: Wilderness values will gradually decline adjacent to any areas developed for mineral production, routes used for OHV recreation, and future wildlife improvement projects will have site-specific impacts on naturalness.


TURTLE MOUNTAIN ROAD
CHEMEHUEVI VALLEY
Wash
95
T5N
T4N
T4N
T3N
T3N
T2N
T2N
T1N
T1N
T1S
Pe
Pe
Pe
Pe
Au,Ag,W, Pb,Zn,Cu
Au,Ag,W, Pb,Zn,Cu
Au,Ag,W, Pb,Zn,Cu
Au,Ag,W, Pb,Zn,Cu
Au,Ag,W, Pb,Zn,Cu
Au,Ag,W, Pb,Zn,Cu
Au,Ag,W, Pb,Zn,Cu
Au,Ag,W, Pb,Zn,Cu
VALLEY
Homer
Wash
Gary
Mopah Spring
Mopah Peaks
Mopah Range
Castle Rock
Negro Peak
Pyramid Butte
Martins Well
Johnsons Well
WARD
Saltmarsh
DANBY
LAKE
CADIZ
ROAD
Sablon
ATCHISON TOPEKA AND SANTA FE
BASE LINE
Spring
VIDAL
VALLEY
62
62
Gravel Pit
Freda
SAND
SAN BERNARDINO CO
RIVERSIDE CO
Rice
COLORADO RIVER AQUEDUCT
Radio Tower
R18E
R19E
R19E
R20E
R20E
R21E
R21E
R22E
Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
0 1 2 3
MILES
Commodity Symbols
Ag Silver
Au Gold
Cu Copper
Pb Leed
Pe Perlite
W Tungsten
Zn Zinc
N

Turtle Mountains
Mineral Resource Potential

MAP-2
CDCA-307

2. Impact on Motorized Recreation: Approximately 16 miles of primitive ways which are presently approved vehicle routes will be closed to motorized use, primarily in the southern portion of the WSA. The bulk of the new wilderness is within an area that has been closed to vehicles since 1976. The remaining open routes will continue to be available for use.

3. Impact on Rockhounding Opportunities: There will be no change in opportunities in the portion of the WSA north of Gary Wash, including the Carson Well area, the favored location for collecting Mopah roses. Current motorized access to this area will continue. Opportunities will be severely restricted, however, in areas closed to vehicles because of wilderness designation.

4. Impact on Unusual Plant Assemblages: UPAs at water sources outside the proposed wilderness will continue to be managed in accordance with the CDCA Plan, requiring special consideration in environmental analyses to avoid or minimize impacts, and development of rehabilitation measures where impacts are unavoidable. UPAs within the wilderness will also receive the special consideration mandated by the CDCA Plan, plus the special legislative protection against surface-disturbing activities that wilderness designation will provide.

5. Impact on Native American Values: Sacred features will be subject to protection under the American Indian Religious Freedom Act. Any changes in physical appearance or use of sacred sites will be made only with the concurrence of the affected Native American group. Native American access to traditionally used sites within the wilderness area will be restricted to nonmotorized means.

6. Impact on Archeological Resources: Most resources are concentrated around Mopah Spring, which will be included within the wilderness area and thus protected from surface disturbance to the maximum extent possible. Outside the wilderness, all formally proposed actions will be subjected to environmental analysis to allow the detection and salvage of any resources.

7. Impact on Habitat of Wildlife Species of Special Concern: Both within and outside the wilderness, future planned actions will be subject to environmental analysis to identify any potential impacts to desert tortoise, bighorn sheep, golden eagles, and prairie falcons, allowing development and implementation of appropriate mitigation measures. The bighorn habitat is almost entirely contained within the recommended wilderness, which will help assure its preservation in a natural state.

8. Impact on Locatable Minerals: Forty-four percent of the WSA will be withdrawn from mineral entry, including mineral leasing, resulting in a moderate adverse impact to exploration and development since only those claims with a valid discovery can proceed with development. The remaining 56% of the WSA not recommended for

wilderness designation will remain open for mineral development based on applicable laws and regulations and guidelines defined in the CDCA Plan.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA-Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Known inaccuracies are noted in parentheses.

1. Inventory Phase: Seventeen comments were received. They referred to the following aspects of the WSA: presence of "roads" within the WSA, mineral potential, unique geology, outstanding primitive recreation potential, and outstanding solitude. The "roads" were field-checked and found to not meet the legal definition. Some areas were excluded from the recommended area due to mining activities.

2. Study Phase: Fifty of the letters received during the study phase favored wilderness designation. Many urged the inclusion of the northeast portion of the WSA to protect the values of the Chemehuevi Wash which include the northern limit of ironwood stands, smoke trees, palo verde, and crucifixion thorn, as well as habitat for unique species of wood-boring beetles, spadefoot toad, and other wildlife and a major drainage system for several mountain ranges. Respondents felt that these high values warrant the rehabilitation of impacts of past mining and motorized vehicle use, much of the latter a result of the Parker 400 race. Several respondents recommended deleting the route from the WSA, rerouting it, or designating only a narrow corridor for the race so that wilderness qualities could be protected in the rest of the area.

   Other areas mentioned specifically for protection included Cotton Valley, Vidal Valley, Mopah Peak, Stepladder Mountains (the Stepladder Mountains are not within this WSA), Mopah Springs, and Homer Wash. Values in need of protection within these areas include volcanic formations, Nelson bighorn sheep, creosote shrubland, historic mines, and archaeological sites. The area was described as a "good biologic guidepost" that could be designated as an outstanding natural area or as part of a larger East Mojave National Park. Day hikes and backpacking were described as excellent in this area, which is wild and little visited.

Some respondents stated that wilderness values exist only in the interior of the Turtle Mountains, in the middle 30 percent of the roadless area away from the visual influence of the aqueduct and highways and away from the noise of the railroad and auto traffic. Other sights and sounds said to detract from wilderness quality were aircraft overflights, powerlines, remains of structures, and lights of nearby communities at night.

Values more important than wilderness, according to some respondents, include vehicle-related recreation such as four-wheel driving and motorcycle riding, prospecting, rock climbing, trail riding, camping, and driving for pleasure. Rockhounds mentioned the loss of the interior of the Turtle Mountains because of the lack of vehicle access to collect turquoise chrysocolla, banded moss agate, and the famed "Mopah Roses."

Much of the WSA has good mineral potential, according to some respondents. Deposits at Horn mine indicate possible significant amounts of gold, silver, and copper in the area. A need for access for flood control and derailment work was expressed by the AT&SF railroad.

Eighteen comments were received in response to the Public Input Workbook (3/15/79). Fourteen favored wilderness designation, and many of these urged inclusion of the northeast Chemehuevi Wash portion. Three respondents opposed wilderness, preferring continuation of existing uses.

3. Draft Plan Alternatives: A variety of comments specific to this WSA were received in response to the Draft Plan Alternatives. Several agreed with the Protection Alternative which recommended almost all of this WSA as suitable. Inclusion of the nonmountainous wilderness in the Chemehuevi Wash area was again mentioned. One respondent agreed with the amount of wilderness recommended in the Balanced Alternative, while another disagreed. General comments included the recommendation to add a buffer strip around the wilderness and the opinion that exploration for and development of oil, gas, and geothermal resources under the No Action Alternative would be the best use of the WSA.

The National Outdoor Coalition (NOC), a coalition of mining, rockhounding, and off-highway vehicle groups, recommended wilderness designation for a portion of this WSA, similar to, but not identical with, the amount recommended in the Use Alternative. Hundreds of club members sent in printed coupons or letters supporting this position. Conservation-oriented groups and individuals supported the Sierra Club position of recommending almost all of the WSA as suitable.

4. Proposed Plan: Hundreds of respondents complained that the WSA had been reduced to just the "ice and rocks, essentially the vertical cliffs of the Turtle Mountains." They wanted the area expanded to that recommended in the Protection Alternative of the Draft Plan. The State of California Department of Resources took this position. Some other respondents repeated the request that the area be left open for rockhounding.

   No comments were received from local governments.

APPENDIX 1

ESTIMATED COSTS OF ACQUISITION OF NON-FEDERAL HOLDINGS WITHIN AREAS RECOMMENDED FOR DESIGNATION

TURTLE MOUNTAINS WSA (CDCA-307)

	LEGAL DESCRIPTION						TYPE OF OWNERSHIP BY ESTATE				ESTIMATED COST OF ACQUISITION	
PARCEL No.	TWNSHP	RNG	SEC	MERIDIAN	TOTAL ACREAGE	NUMBER OF OWNERS	SURFACE ESTATE	SUBSURFACE ESTATE	PRESENTLY PROPOSED FOR ACQUISITION	PREFERRED METHOD OF ACQUISITION	LAND COSTS ($1000)	PROCESSING COSTS ($1000)
1	3N.	20E.	16	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
2	3N.	20E.	36	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
3	3N.	21E.	16	SBM	600	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
4	3N.	21E.	36	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
5	2N.	20E.	16	SBM	625	1	STATE	STATE	YES	EXCHANGE	N/A	4.0

These figures were derived from Bureau Land Records and provide for more detail than GIS estimates and therefore may differ from acreage summaries in Table 1.

Chemehuevi Mountains

CDCA 310

CHEMEHUEVI MOUNTAINS WILDERNESS STUDY AREA (WSA)

(CDCA-310)

1. THE STUDY AREA --- 87,983 acres

The Chemehuevi Mountains WSA is at the eastern edge of San Bernardino County and the California Desert Conservation Area (CDCA). The nearest cities are Needles, California, 12 miles northwest; and Lake Havasu City, Arizona, 40 road miles east. The study area contains 61,853 acres of public land under the jurisdiction of the Bureau of Land Management (BLM), 3,158 acres of State land, and 22,972 private land (see Map 1 and Table 1).

U.S. Highway 95 borders the WSA on the west. The north boundary is a combination of section lines and a gas line maintenance road. At the northeast corner, the WSA boundary follows the administrative boundary of the CDCA until it meets the Havasu National Wildlife Refuge. The east WSA boundary coincides with the wildlife refuge boundary, and the Chemehuevi Indian Reservation boundary. The Colorado River is one-half of a mile to four miles from the WSA's east edge. The south boundary of the WSA is Havasu Landing Road and a power transmission line.

The Chemehuevi Mountains are a horseshoe-shaped range, with the open end facing eastward toward the Colorado River. Contained within the arms of the horseshoe is a large central valley with low rolling hills covered by dense stands of cholla and other cactus, ocotillo, and an occasional agave. On the west, the mountains drop sharply to a bajada that leads into Chemehuevi Valley. Viewed from the west, the strikingly light, almost white, granite peaks contrast sharply with the rich green creosote and cactus-covered bajada. A few miles from the Colorado River, the mountains change dramatically from light-colored granite to dark red and gray volcanic spires and mesas. Broad, sandy, tree-lined washes cross the WSA from west to east. The largest of these washes, Trampas, has cut its way through the mountains, providing the easiest access into the interior of the WSA for hikers, and the only access route for vehicles to the Colorado River.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EISs) for the CDCA Plan: protection, use, balanced, and no action; a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

87,375	acres recommended for wilderness
0	BLM acres recommended for nonwilderness

All wilderness is the recommendation for this WSA. In addition to the Federal acreage recommended for wilderness, BLM recommends that 3,158 acres of State land, and 22,364 acres of private land be acquired through exchange or purchase and designated as wilderness. With acquisition of these inholdings, a total of 87,375 acres are recommended for wilderness. Appendix 1 lists all inholdings and provides additional information on their acquisition. All wilderness is the balanced alternative and environmentally preferable alternative, as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The all-wilderness recommendation is based on the following rationale: (1) the study area's wilderness qualities exemplify the definition of wilderness provided in the Wilderness Act, and provide uncommon primitive recreation opportunities; (2) wilderness designation would preserve, in its natural state, a portion of a ecological transition zone with unusual diversity of plant and animal species; and (3) wilderness designation would create few conflicts with other resource uses.

The WSA's diverse topography and relatively dense vegetation offer visual screening which creates numerous opportunities for solitude. The steep volcanic and granitic cliffs and spires provide excellent locations for desert rock climbing and exploration. The closeness of the Colorado River makes a combined desert hiking and canoeing trip possible, a combination of recreational opportunities found in few other recommended wilderness areas in the California desert. Good scenic quality and opportunities to view desert bighorn sheep and hunt desert mule deer contribute to the appeal of this primitive region. The suitability recommendation will preclude any further vehicular use of approximately 35 miles of primitive access routes of travel.

A thin strip of land between the Chemehuevi Mountains WSA and the Colorado River is administered by the U.S. Fish and Wildlife Service (Havasu National Wildlife Refuge) and Arizona BLM's Yuma District. The 960 acres of Chemehuevi/Needles AD WSA (AZ-050-004) have been recommended suitable for wilderness designation. In 1978, the President recommended that 2,510 acres of contiguous Refuge lands and lands on the east bank of the river be included within the National Wilderness Preservation System. Inclusion of both BLM and Refuge lands in the Wilderness System would result in a combined wilderness of over 60,000 acres and afford unique opportunities for a combined desert hiking/backpacking/canoeing experience. Since Refuge lands are closed to camping, BLM wilderness lands within a mile of the river would be an important component of the overall experience. The combined BLM-U.S. Fish and Wildlife Service wilderness would also enhance overall protection of the unique variety of wildlife habitats found in the area.

The WSA contains a mixture of Sonoran and Mojave Desert species. The flora and fauna of the area are also influenced by the proximity of the Colorado River. The WSA's position between two desert ecosystems, plus the infusion of river species and species found principally to the east in Arizona, give this area an unusually high species diversity. Wilderness designation would protect the rich diversity of plant and animal life by preserving their habitat in its natural state.

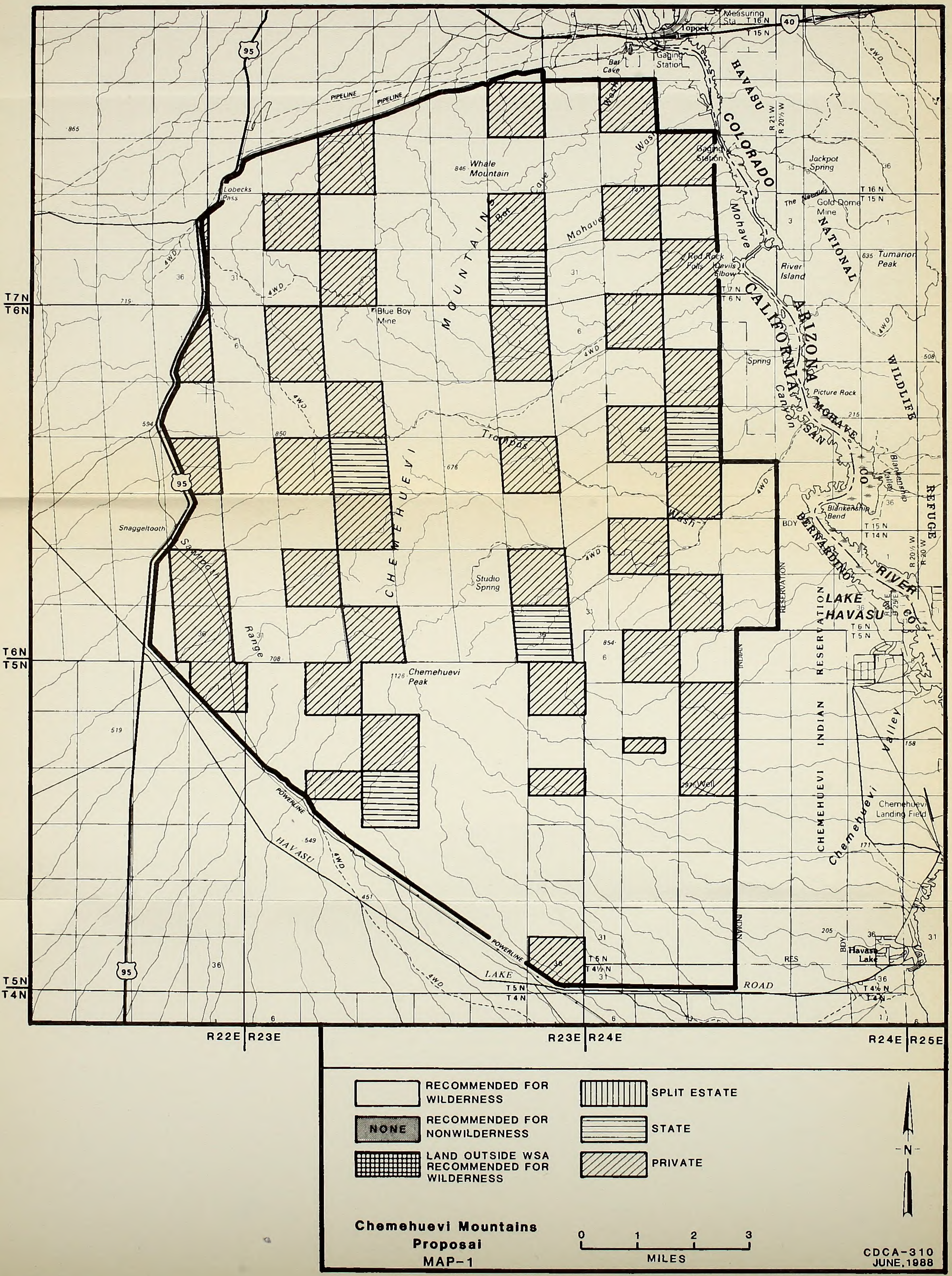
In addition to the outstanding scenic, wildlife, and primitive recreational values, U.S. Bureau of Mines BOM & U.S. Geological Survey (USGS) investigations conducted in the WSA indicate that nearly the entire area has low potential for mineral and energy resources. The WSA currently contains no unpatented mining claims. Therefore, wilderness designation will create very few conflicts with other resource uses.

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	61,853
Split Estate	(BLM surface only)	0
Inholdings		
State		3,158
Private		22,972
Total		87,983
Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	61,853
BLM	(outside WSA)	0
Split Estate	(within WSA)[1]	0
Split Estate	(outside WSA)[1]	0
Total BLM Land Recommended for Wilderness		61,853
Inholdings[1]		
State		3,158
Private		22,364
Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	0
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		0

---

[1] Appendix 1 is a detailed description of inholdings and split estate tracts included within the study. For purposes of this report, split estate lands are defined only as those lands with Federal surface and non Federal subsurface (minerals). Lands that have Federal minerals but non Federal surface should be classified in this report by the owner of the surface estate.


Measuring Sta.
T 16 N
T 15 N
40
Topock
95
Bat Cave
Gaging Station
HAVASU
R 21 W
R 20½ W
COLORADO
PIPELINE
PIPELINE
865
Wash
Wash
Gaging Station
846 Whale Mountain
Jackpot Spring
The Needles
Gold Dome Mine
T 16 N
T 15 N
Lobecks Pass
Bat Cave
Mohave
NATIONAL
Mohave
Tumarion Peak
635
Red Rock Falls
Devils Elbow
River Island
4WD
T7N
T6N
715
Blue Boy Mine
MOUNTAINS
CALIFORNIA
ARIZONA
Spring
WILDLIFE
508
Canyon
Picture Rock
MOHAVE
SAN
594
850
Trampas
676
CHEMEHUEVI
95
Blankenship Valley
Blankenship Bend
REFUGE
Snaggeltooth
Sawtooth Range
Studio Spring
BDY
BERNARDINO
T 15 N
T 14 N
R 20½ W
R 20 W
RIVER
CO
LAKE HAVASU
RESERVATION
T6N
T5N
708
1126 Chemehuevi Peak
854
INDIAN
CHEMEHUEVI INDIAN RESERVATION
519
Valley
158
Chemehuevi
POWERLINE
297 Well
Chemehuevi Landing Field
HAVASU
549
4WD
171
451
POWERLINE
205
Havasu Lake
95
36
LAKE
T5N
T4½N
T5N
T4N
ROAD
RES
T 4½ N
T4N
R22E R23E
R23E R24E
R24E R25E
RECOMMENDED FOR WILDERNESS
NONE
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
0 1 2 3
MILES
N

Chemehuevi Mountains Proposal
MAP-1

CDCA-310
JUNE, 1988

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: Most of this large area has been affected primarily by natural forces, with man's imprint substantially unnoticeable. An unmaintained off-highway vehicle trail splits the area, running from the west boundary through the mountains and Trampas Wash to the Colorado River. This access route is located in sandy washes, where tracks are erased with each rain storm. There is one big-game guzzler in the central portion of the WSA. An unmaintained way runs through the WSA for four miles on the west side of the small Sawtooth Range, but has little effect upon the naturalness of the area as the surrounding vegetation provides effective screening.

2. Solitude: The diverse topography and dense vegetation offers a degree of visual screening which creates numerous opportunities for solitude.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: The area has a variety of challenging terrain for hikers, and coupled with the relatively low visitation, opportunities for a primitive recreation experience are abundant. The steep volcanic and granitic cliffs and spires provide excellent locations for desert rock climbing and exploration.

4. Special Features: Although the area is predicted to be rich in cultural resources, only about 30 sites have been recorded because less than one and one-half square miles have been systematically inventoried by archaeologists. The sites located so far are stone tool quarries and production sites, habitation areas including rock shelters and open air camps as indicated by sleeping circles and fire rings, and rock art. One of the finest examples of rock art in the Mojave Desert is a pictograph on the ceiling of a rock shelter in the southern Chemehuevi Mountains. It shows a large cracked and split red sphere about three feet across being held by two black hands. Pottery, stone tools, and other material remains of prehistoric cultures have been found along the trails and at abandoned camps or shelters.

   The Chemehuevi Mountains mark the southern end of the territory formerly occupied by the Mohave Indians, making it likely that most of the prehistoric materials found here were left by their ancestors. The WSA's pictographs and petroglyphs are sacred images to the Mohave living in Parker and Needles.

The eastern side of the Chemehuevi Mountains are inhabited by a band of wild and free-roaming burros. The mountains support a herd of 25 to 30 desert bighorn sheep, a BLM sensitive species in California. One big-game guzzler has been installed to support this population and the area is of high priority for eventual bighorn sheep transplants from other areas. The WSA contains habitat for the desert tortoise, a species under status review by the U.S. Fish and Wildlife Service for possible listing as threatened or endangered. Approximately five square miles of the WSA supports population densities of 50 to 100 tortoises per square mile. Another 13 square miles support densities of 20 to 50 tortoises per square mile.

B. Diversity in the National Wilderness Preservation System

1. Assessing the diversity of natural systems and features as represented by ecosystems: The WSA is located where the Sonoran and Mojave Deserts meet. This WSA contains 32,682 acres of the American Desert/Creosote bush (*Larrea*) and 29,171 acres of the American Desert/Creosote Bush-Bur Sage (*Larrea*-*Franseria*) ecosystem. The WSA's position between these two desert ecosystems, combined with its location on the Colorado River, give this area an uncommonly rich diversity of plant and animal species.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas areas	NWPS Areas acres	Other BLM Studies areas	Other BLM Studies acres
	NATIONWIDE			
American Desert/Creosote Bush	1	343,753	117	4,235,158
American Desert/Creosote Bush-Bur Sage	3	126,033	48	1,542,833
	CALIFORNIA			
American Desert/Creosote Bush	1	343,753	88	3,621,354
American Desert/Creosote Bush-Bur Sage	2	26,427	20	948,372

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of five major population centers. Table 3 summarizes the number and acreage of wilderness areas and other BLM study areas within a five-hour drive of these population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas areas	NWPS areas acres	Other BLM Studies areas	Other BLM Studies acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Riverside-San Bernardino	22	2,031,054	205	7,658,649
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,126,463

3. Balancing the geographic distribution of wilderness areas: The closest designated wilderness is in Joshua Tree National Monument, managed by the National Park Service, 60 air miles southwest. Nine BLM study areas recommended for wilderness designation are within 50 air miles of the Chemehuevi Mountains WSA, five in Arizona's Phoenix District, one in Arizona's Yuma District, and three in the California Desert District.

C. Manageability

The Chemehuevi Mountains WSA is manageable as wilderness. The north, west, and south boundaries follow readily identifiable features which would limit posting requirements. The east boundary is contiguous with lands proposed for wilderness by the U.S. Fish and Wildlife Service, and Arizona BLM's Yuma District.

To make all lands within the boundary wilderness, 97 sections of private lands and four sections belonging to the State of California will need to be acquired.

A portion of the Colorado River Burro Herd Management Area is within the WSA. Wilderness designation could have impacts on management of the burro population, as current census and round-up techniques may not be compatible with wilderness management.

Presently, the vehicle route through Trampas Wash provides important access to the WSA, for BLM and California Department of Fish and Game administrative purposes, maintenance of the bighorn sheep guzzler, and for recreational purposes, both motorized and nonmotorized. Continued motorized use in Trampas Wash is a viable management option for Congress to consider. Points in Trampas Wash presently serve as trailheads for hiking and backpacking.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

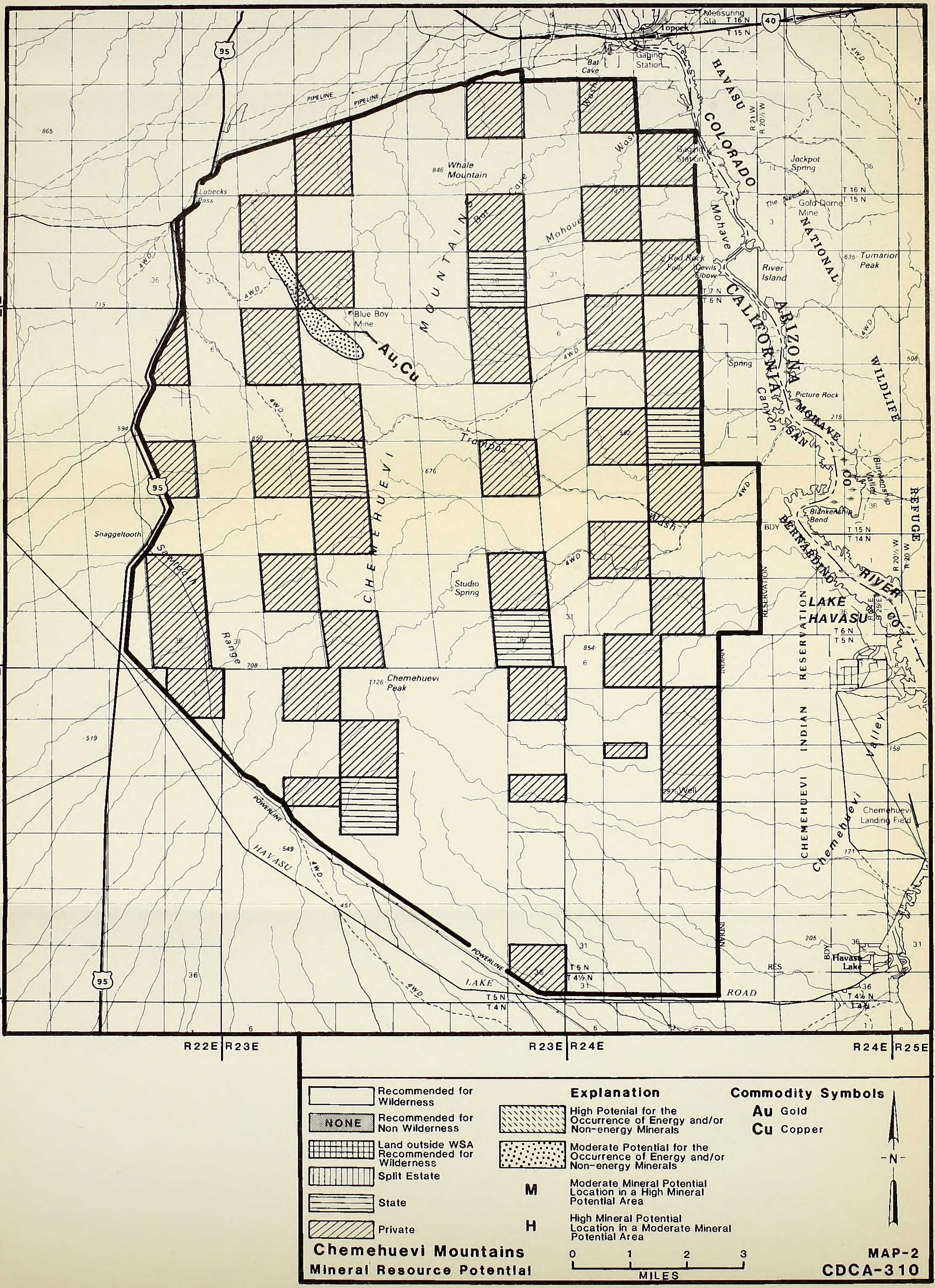
D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Chemehuevi Mountains WSA is located in the BLM Sacramento Mountains Geology-Energy-Mineral (G-E-M) Resource Area (GRA). The mineral resource data for the WSA had not been fully analyzed and interpreted at the time of the preliminary suitability recommendation. However, the CDCA Plan EIS did indicate that there was an unclassified potential for metals, clay, and sand and gravel in the WSA. As of December 1979 there were no unpatented mining claims located in the WSA; however, there were two large blocks of 597 unpatented mining claims just outside the western boundary of the WSA.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Recommendation: USGS and BOM conducted mineral surveys of the WSA from 1981 to 1982. The BOM released a report of their activity in 1983 (MLA-42-83). Results of these surveys were released in a combined mineral survey summary report. This report determined that the entire Chemehuevi Mountains WSA had only a low potential for mineral resources. Surface mineralization was identified at the Blue Boy Mine, in the north-central portion of the WSA. The Blue Boy developments consist of a shaft 40 feet deep on a fault zone, with surface staining of copper oxides. Samples taken by the BOM indicated secondary concentrations of copper (20,000 parts per million) and gold (50 parts per million). It was found that the mineralization was low grade, and is probably a near-surface secondary enrichment not extending to depth. The analysis of samples from the Blue Boy Mine shows that copper ranges at two percent, and gold at one and one-half ounces per ton. Based on the BLM classification system, the area of the fault structure developed by the Blue Boy Mine in the north central portion of the WSA is classified as having a moderate potential for the occurrence of copper and gold, as shown on Map 2.

   Sand and gravel deposits were identified near the margins of the mountains along the southern and eastern boundaries of the WSA. Because there are more readily accessible deposits outside the WSA, USGS classified these deposits as having a low potential.

   As of December 1987, there were no unpatented mining claims, located within the WSA, recorded with the BLM.



Recommended for Wilderness
NONE Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
Au Gold
Cu Copper
N
0 1 2 3
MILES
Au,Cu
Blue Boy Mine
CHEMEHUEVI MOUNTAINS
Whale Mountain
Chemehuevi Peak
Studio Spring
Snaggeltooth
Sawtooth Range
Lobecks Pass
Topock
Bat Cave
Gaging Station
Measuring Sta
HAVASU
COLORADO
CALIFORNIA
ARIZONA
HAVASU NATIONAL WILDLIFE REFUGE
Mohave Canyon
Jackpot Spring
The Needles
Gold Dome Mine
Tumarion Peak
River Island
Red Rock Falls
Devils Elbow
Picture Rock
MOHAVE CO
SAN BERNARDINO
RIVER
Blankenship Valley
Blankenship Bend
LAKE HAVASU
CHEMEHUEVI INDIAN RESERVATION
Chemehuevi Valley
Chemehuevi Landing Field
Havasu Lake
Well
POWERLINE
PIPELINE
HAVASU LAKE ROAD
4WD
T7N T6N
T6N T5N
T5N T4N
R22E R23E
R23E R24E
R24E R25E
95
40

Chemehuevi Mountains
Mineral Resource Potential

MAP-2
CDCA-310

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Wilderness values will be maintained through wilderness designation of the entire study area. If the vehicle route through Trampas Wash is closed, opportunities for primitive recreation will be constrained by a lack of access to the area.

2. Impact on Motorized Recreation: Approximately 21 miles of primitive ways and washes which serve as vehicle routes will be closed to all motorized use. If the 11-mile Trampas Wash route is left open to motor vehicles, the proposed action will have only a minimal negative impact.

3. Impact on Management of Bighorn Sheep and Desert Tortoise Populations: The habitat of these species will be preserved in a natural condition. However, restrictions will be placed on motorized access for management activities such as sheep transplants and water source maintenance. Once the area is designated wilderness, an administrative determination will be made to provide for maintenance of bighorn sheep guzzlers.

4. Impact on Cultural Resources: Reduction of vehicular access will reduce vandalism to archeological sites. However, restrictions will be placed on resource stabilization and scientific excavation.

5. Impact on Native American Uses and Values: Access to sacred sites will be restricted to nonmotorized means. Sites with religious significance will be protected under the American Indian Religious Freedom Act.

6. Impact on Management of Wild Burro Population: Wilderness designation would have minor adverse impacts on burro management in the area. Viable, healthy populations of wild burros will be maintained in the wilderness area as prescribed in the Wild Free-Roaming Horse and Burro Act of 1971, as amended. Periodic forage studies, herd counts, and roundups will be required to maintain the wild burro population of the Chemehuevi Mountain within the carrying capacity determined by the Colorado River Herd Management Area Plan. Some techniques currently used will have to be discontinued as they are not compatible with wilderness management.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA-Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Known inaccuracies are noted in parentheses.

1. Inventory Phase: Comments dealing with inventory indicated the existence of the jeep trail through Trampas Wash. Other comments agreed with the findings.

2. Study Phase: Of the 12 comments received on this WSA, six were in favor of wilderness designation. Features noted in support of this recommendation include special wildlife values - the Great Plains toad, Great Basin Spadefoot toad, tree lizard, western ground snake, Sonoran lyre snake, bighorn sheep, and mountain lions. Other features were scenic rock groupings, archaeological artifacts, and, as one respondent put it, "beautiful groupings of rocks, palo verde and cacti in a setting of utter solitude." One respondent suggested combining the Chemehuevi Valley, Turtle Mountains, and Whipple Mountains into a contiguous wilderness area.

   Requests for access for various multiple uses included the following: potential for oil, gas, and geothermal resources may exist in the area; the Bureau of Reclamation may need the east face of the mountains for the Colorado River Project rip-rap sites; AT&SF Railroad personnel need access for flood control, drainage surveys and derailment work.

   Only the middle 50 percent of the WSA has outstanding wilderness values according to one letter. Another respondent pointed out features which degrade wilderness quality in the outer portions of the WSA. These include the Southern California Gas Company Pipeline, the Metropolitan Water District's 230 KV transmission line, State Route 95 and Lake Havasu Road, all of which were said to present a visual influence for one to two miles into the WSA. Concern about the effect of private land holdings was also stressed.

   Three comments were received in response to the Public Input Workbook (3/15/79). They recommended boundary changes to enhance wilderness quality, to maximize wilderness, or to restrict motorized vehicle use. One stated that access is inadequate for entering exploration areas.

3. Draft Plan Alternatives: Several comments specific to this WSA were received in response to the Draft Plan Alternatives. Some respondents agreed with the Protection Alternative. Others wanted more wilderness added by combining inventory units 309 and 309A.

General comments include the opinion that exploration for and development of oil, gas, and geothermal resources under the No Action Alternative would be the best use of the WSA.

The National Outdoor Coalition (NOC), a coalition of mining, rockhounding, and off-highway vehicle groups, recommended that the center of the WSA should be designated wilderness, the western portion Class "M" (medium use), and the eastern portion Class "L" (limited use). This position was supported by coupons and letters sent by hundreds of members of NOC organizations. The Sierra Club and other conservation-oriented groups supported the Balanced Alternative, which recommended the entire WSA as suitable.

4. Proposed Plan: Few specific comments addressed this particular WSA in response to the Proposed Plan and Final EIS. One new issue was brought up by an applicant for a grazing lease which overlapped the southern portion of the WSA.

5. 1981 CDCA Plan Amendments: In 1981, a proposal was made to add a new grazing allotment to the WSA. The new allotment would cover the southern portion of WSA 310, part of the Chemehuevi Valley. The amendment was approved.

   Fifteen letters were received in response to this proposal, four in favor and eleven opposed. One person favoring approval stated that the allotment had apparently been overlooked in the original surveys and that it would be unfair to penalize the people who claimed to have been grazing in the area for decades. Another said that if the allotment is approved, the BLM should require that one burro be removed for each ten cattle authorized.

   Most persons who opposed the grazing allotment were concerned about potential impact on the desert tortoise which is at present in high concentrations in the Fenner-Chemehuevi Valley. Others mentioned the danger to the resources of soil and wildlife.

   No comments were received from local governments.

APPENDIX 1

ESTIMATED COSTS OF ACQUISITION OF NON-FEDERAL HOLDINGS WITHIN AREAS RECOMMENDED FOR DESIGNATION

CHEMEHUEVI MOUNTAINS WSA (CDCA-310)

	LEGAL DESCRIPTION						TYPE OF OWNERSHIP BY ESTATE				ESTIMATED COST OF ACQUISITION	
PARCEL No.	TWNSHP	RNG	SEC	MERIDIAN	TOTAL ACREAGE	NUMBER OF OWNERS	SURFACE ESTATE	SUBSURFACE ESTATE	PRESENTLY PROPOSED FOR ACQUISITION	PREFERRED METHOD OF ACQUISITION	LAND COSTS ($1000)	PROCESSING COSTS ($1000)
1	5N.	23E.	36	SBM	520	1	PRIVATE	PRIVATE	YES	PURCHASE	52.0	2.5
2	7N.	23E.	13	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
3	7N.	23E.	16	SBM	*(100)	3	PRIVATE	PRIVATE	YES	PURCHASE	(10.0)	7.5
4	7N.	23E.	21	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
5	7N.	23E.	25	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
6	7N.	23E.	29	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
7	7N.	23E.	33	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
8	7N.	23E.	36	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
9	6N.	23E.	1	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
10	6N.	23E.	5	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
11	6N.	23E.	9	SBM	650	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
12	6N.	23E.	13	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
13	6N.	23E.	16	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
14	6N.	23E.	17	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
15	6N.	23E.	21	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
16	6N.	23E.	25	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
17	6N.	23E.	29	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
18	6N.	23E.	33	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
19	6N.	23E.	36	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
20	6N.	22E.	1	SBM	320	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
21	6N.	22E.	13	SBM	480	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
22	6N.	22E.	25	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
23	6N.	22E.	36	SBM	*(640)	53	PRIVATE	PRIVATE	YES	PURCHASE	(64.0)	132.5
24	5N.	22E.	1	SBM	580	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
25	5N.	23E.	1	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
26	5N.	23E.	5	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
27	5N.	23E.	9	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
28	5N.	23E.	13	SBM	320	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
29	5N.	23E.	16	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
30	5N.	23E.	17	SBM	320	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
31	5N.	24E.	5	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
32	5N.	24E.	9	SBM	*(640)	2	PRIVATE	PRIVATE	YES	PURCHASE	(64.0)	5.0
33	5N.	24E.	16	SBM	640	1	PRIVATE	PRIVATE	YES	PURCHASE	64.0	2.5
34	5N.	24E.	17	SBM	120	1	PRIVATE	PRIVATE	YES	PURCHASE	12.0	2.5
35	6N.	24E.	5	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
36	6N.	24E.	9	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0

These figures were derived from Bureau Land Records and provide for more detail than GIS estimates and therefore may differ from acreage summaries in Table 1.

(APPENDIX 1 CHEMEHUEVI MOUNTAINS WSA CON'T)

PARCEL No.	LEGAL DESCRIPTION TWNSHP	RNG	SEC	MERIDIAN	TOTAL ACREAGE	NUMBER OF OWNERS	TYPE OF OWNERSHIP BY ESTATE SURFACE ESTATE	SUBSURFACE ESTATE	PRESENTLY PROPOSED FOR ACQUISITION	PREFERRED METHOD OF ACQUISITION	ESTIMATED COST OF ACQUISITION LAND COSTS ($1000)	PROCESSING COSTS ($1000)
37	6N.	24E.	16	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
38	6N.	24E.	17	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
39	6N.	24E.	21	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
40	6N.	24E.	29	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
41	6N.	24E.	33	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
42	7N.	24E.	21	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
43	7N.	24E.	29	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0
44	7N.	24E.	33	SBM	640	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0

* Indicates that exact parcel acreage is unknown. Total acreage and total estimated costs for all such parcels in a particular section are shown in ( ).

These figures were derived from Bureau Land Records and provide for more detail than GIS estimates and therefore may differ from acreage summaries in Table 1.

Whipple Mountains

CDCA 312

WHIPPLE MOUNTAINS WILDERNESS STUDY AREA (WSA)

(CDCA-312)

1. THE STUDY AREA --- 92,282 acres

The Whipple Mountains WSA is located in San Bernardino County in the eastern portion of the California Desert Conservation Area (CDCA). The nearest community is Parker, Arizona, located ten miles southeast. The WSA includes 87,333 acres of public land under the jurisdiction of the Bureau of Land Management (BLM), 4,120 acres of State lands and 829 acres of private lands (see Map 1 and Table 1).

The study area is bounded on the northeast by a powerline, and in places its associated access road. The Chemehuevi Indian Reservation lands also form a portion of the northern boundary. To the east, the boundary is delineated by land withdrawn to the Bureau of Reclamation, and then it diverges toward the center of the study area to avoid surface disturbances caused by historic mining. The southern boundary follows the edge of a dirt road which accesses the Colorado River Aqueduct, and then trends west following the topography of the Whipple Mountain formation. On the west side, the boundary is defined by a series of dirt roads.

The Whipple Mountains comprise the dominant landform within this WSA. The mountains are a large east-west oriented massif. The western one-half is composed of pale green formations. A low angle fault separates the pale green formations of the western side from the striking brick-red, steeply carved volcanics to the east. Landforms are diverse and range from valley floors and washes to steep-walled canyons, domed peaks and eroded spires towering to 4,000 feet in elevation. Among the rugged peaks and meandering washes are natural bridges of red-brown lava and horizontally striped, brick-red sedimentary rock capped with gray-green sediment. Flowing westward from these color contrasting spires, domes and bridges are bajadas with isolated lava rock masses and red sandstone outcrops. Large areas of desert pavement can also be found. Two major vegetation associations are present within the study area; the Sonoran creosote bush scrub and the Sonoran thorn forest. Dominant vegetation is creosote bush scrub, and locally dense stands of palo verde, ironwood, smoke tree and numerous species of cacti including cholla, saguaro, foxtail and Mojave prickly pear.

The Whipple Mountains contain concentrations of some of the most significant and sensitive cultural resources in the California Desert. Over 30 archaeological sites are known within the WSA. The entire eastern half of the WSA is marked by extreme sensitivity to Native Americans. In 1981, portions of the eastern Whipple Mountains were designated as an Area of Critical Environmental Concern (ACEC) to provide for the protection of the cultural and Native American resources present in the area. The ACEC overlaps less than one percent of the WSA.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Various suitability recommendations were analyzed in the Draft and Final Environmental Impact Statements (EIS) for the CDCA Plan and a summary of the area's wilderness values was included in Appendix III of the Final EIS. Six different suitability recommendations were analyzed in the EIS's: all wilderness, no wilderness and four partial alternatives ranging from 85% to 90% suitable.

2. RECOMMENDATION AND RATIONALE ---

74,515 acres recommended for wilderness
15,270 BLM acres recommended for nonwilderness

Partial wilderness (81% suitable) is the recommendation for this WSA. The 15,270 acres in this WSA recommended nonsuitable are released for uses other than wilderness. In addition to the Federal acreage recommended for wilderness, BLM recommends that 173 acres of private land and 2,279 acres of State lands be acquired through purchase or exchange and designated as wilderness. With acquisition of these inholdings, a total of 74,515 acres are recommended for wilderness. Appendix 1 lists all inholdings and provides additional information on their acquisition. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

Those lands recommended suitable possess an outstanding primitive character exemplifying the qualities described in the definition of wilderness contained in Section 2(c) of the Wilderness Act. In addition to these exceptional wilderness values, the area contains many special features that would benefit from the protection afforded a designated wilderness area.

Because of the roughness of the terrain, the area is undisturbed by man and is affected primarily by natural forces. Most of the area in the Whipple Mountains which is recommended suitable has been closed to vehicle use since 1973. In the area not closed, vehicle use has been limited to designated routes of travel. The suitability recommendation will preclude any further vehicular use of approximately nine miles of primitive access routes of travel. Impacts associated with this activity, while common in other areas, are absent in the Whipples. Within the Whipple Mountains, the "earth and its community of life are untrammeled by man" and "man himself is a visitor who does not remain." The diverse and unique landforms offer excellent opportunities for hiking, backpacking, photography and other primitive and unconfined types of recreation. Low visitation and the screening effects of rugged peaks and canyons insure ample opportunities for the seeker of solitude. The variety of recreational opportunities are limited only by the capabilities and interests of the visitor.

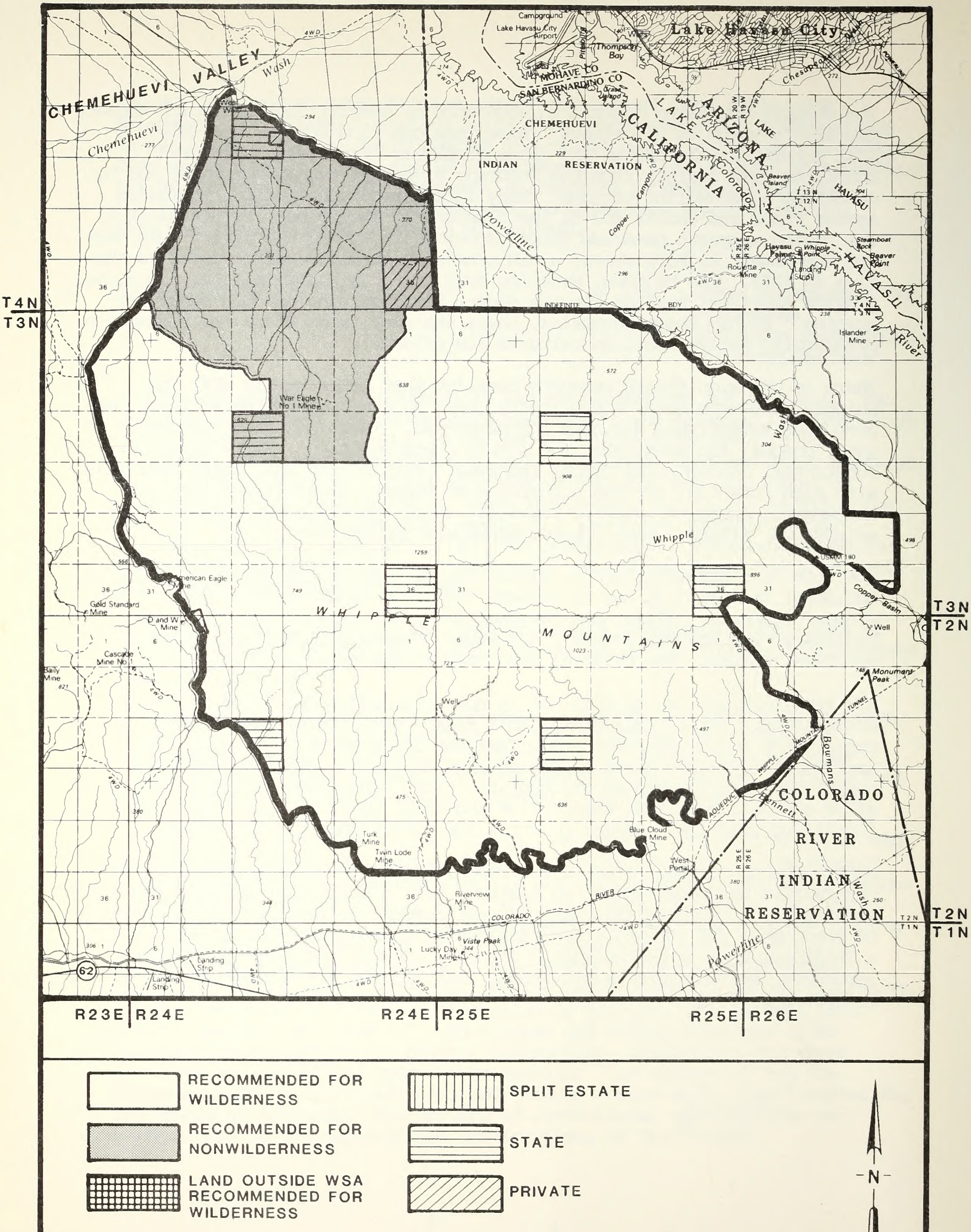
The Whipple Mountains contain an abundance of special features which enhance the area's value as wilderness. Here, one can find some of the desert's most interesting landforms and color displays. The steep, brick-red mountains rise sharply from the Colorado River and extend westward, cut by countless steep-walled canyons. Many varieties of vegetation, including agave, yucca and cholla add to the outstanding scenic quality of the area. The region supports numerous mammal species, including the desert mule deer and the desert bighorn sheep, a BLM sensitive species, reintroduced to the area in 1983. The bajadas, sweeping down from the mountain's western slope, provide excellent habitat for the desert tortoise, another BLM sensitive species. Within these mountains, there are many areas where the remnants of prehistoric Native American cultures are evident.

There is one significant resource conflict that affects this WSA. The Whipple Mountains have, historically, been an area where mineral resources have been extensively explored and developed. There has been production of gold, copper, and manganese, and within these mountains, there remain substantial demonstrated copper reserves. Within this WSA, there are areas with high potential for the occurrence of copper, gold, silver, and manganese. Areas of moderate potential exist for the occurrence of arsenic, molybdenum, silver, gold, copper, manganese and uranium.

The CDCA plan determined that, within the portion of the WSA recommended as suitable, the value of the wilderness resources exceeded the value of the mineral resource. Wilderness designation of the suitably recommended portion of the Whipple Mountain WSA would enhance the important scenic, wildlife, natural, and cultural resources of the area.

The remaining portion of this WSA is not recommended for wilderness designation. Within this nonsuitable area, conflicts between mineral exploration and development and wilderness designation were recognized. Approximately 15,270 acres of public land in the WSA are recommended as nonsuitable for wilderness designation. This nonsuitable designation would allow access for mineral exploration and development and still protect the identified wildlife, scenic, cultural and Native American resources.

Within the nonsuitable area, wilderness values lack significance. Here, naturalness has been reduced by historic mining activity. A route network, constructed to support this mineral development, is kept open by the passage of vehicles. The natural forces acting in the nonsuitable area have created a landscape that is nondescript. The area possesses neither phenomenal landforms, nor striking desert-scapes that are the essence of desert wilderness.


CHEMEHUEVI VALLEY
Chemehuevi Wash
Lake Havasu City
Lake Havasu City Airport
Campground
Thompson Bay
MOHAVE CO
SAN BERNARDINO CO
CHEMEHUEVI INDIAN RESERVATION
ARIZONA
CALIFORNIA
LAKE HAVASU
Colorado
Beaver Island
Havasu Palms
Whipple Point
Steamboat Rock
Beaver Point
Roulette Mine
Landing Strip
Islander Mine
Havasu River
Copper Canyon
Powerline
INDEFINITE BDY
War Eagle No 1 Mine
American Eagle Mine
Gold Standard Mine
D and W Mine
Cascade Mine No 1
Baily Mine
WHIPPLE MOUNTAINS
Whipple Wash
Copper Basin
Well
Monument Peak
TUNNEL
WHIPPLE MOUNTAIN AQUEDUCT
Bowmans
Bennett Wash
COLORADO RIVER INDIAN RESERVATION
Blue Cloud Mine
West Portal
Turk Mine
Twin Lode Mine
Riverview Mine
COLORADO RIVER
Vista Peak
Lucky Day Mine
Landing Strip
62
4WD
T4N
T3N
T3N
T2N
T2N
T1N
R23E R24E
R24E R25E
R25E R26E
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0 1 2 3
MILES

Whipple Mountains Proposal
MAP-1

CDCA-312
JUNE, 1988

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	87,333
Split Estate	(BLM surface only)	0
Inholdings		
State		4,120
Private		829
Total		92,282
Within the Recommended Wilderness Boundary		**Acres**
BLM	(within WSA)	72,063
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		72,063
Inholdings[1]		
State		2,279
Private		173
Within the Area Not Recommended for Wilderness		**Acres**
BLM	(surface and subsurface)	15,270
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		15,270

---

[1] Appendix 1 is a detailed description of inholdings and split estate tracts included within the study. For purposes of this report, split estate lands are defined only as those lands with Federal surface and non Federal subsurface (minerals). Lands that have Federal minerals but non Federal surface should be classified in this report by the owner of the surface estate.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The suitable area is essentially untrammeled by man. The only signs of man are archaeological features, trails, posts and other monuments associated with mining claim location, prospect holes, and mining shafts. Prior to 1973, when the vehicle closure went into effect, vehicle use occurred on many ways and washes penetrating the area, primarily from the southern and eastern borders. Since 1973, with the majority of these ways and washes closed, the natural forces of wind and water have eliminated many of the ways. These signs of past human use are unnoticeable except under the closest scrutiny.

   In the nonsuitable area, historic mining activities have reduced naturalness. The route network associated with the prospects is visually noticeable. The routes, outside of the vehicle closure, are kept open by the continued passage of vehicles.

2. Solitude: Opportunities for solitude are outstanding due to the size of the area and the aspects of terrain. The rugged mountain peaks, intricately eroded spires and deep canyons provide excellent topographical screening.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: This is one of the few WSAs in California where hundreds of visitors can engage in primitive types of recreation before the area reaches its carrying capacity. The area's terrain ensures that the visitor will experience freedom of movement, unhindered by man-made physical barriers.

4. Special Features: Several examples of a unique plant assemblage (UPA)--Vegetation Associated with Seeps and Springs--exist within this WSA. The UPA is classified in the CDCA Plan as highly sensitive due to its extreme rarity in the CDCA and its importance to the survival of desert wildlife. On the extreme easternmost point of the suitable portion of the WSA, a few natural stands of saguaro cactus are found. Although not extensive, this is one of only three such stands in California. Saguaro, though found extensively in Arizona, are rare in California, and are thus protected under California law.

   The diverse vegetative life zones and terrain of the Whipple Mountains support an abundance of wildlife. The area affords superior nesting and foraging habitat for a number of species of raptors, including the prairie falcon, golden eagle, red-tailed hawk, Cooper's hawk, and historically, the peregrine falcon. Barn owls, great horned owls and screech owls are also found in relative abundance.

The WSA's western slopes provide excellent habitat for the desert tortoise. Densities have been recorded at 50 to 100 desert tortoise per square mile. The tortoise is under status review by the U.S. Fish and Wildlife Service for possible listing as a threatened or endangered species. The area also supports many small mammals and big game species. One of the most significant species is the desert mule deer, which inhabits the lower canyon washes dominated by palo verde and ironwood.

In 1983, the Whipple Mountain Habitat Management Plan (HMP) was completed. This document was prepared by the BLM in conjunction with the California Department of Fish and Game. The objective of the HMP is to reestablish a population of desert bighorn sheep in the Whipple Mountains. Reintroduction efforts have been successful. Currently, the Whipple Mountain bighorn sheep herd has an estimated population of 80 animals. Permanent water is provided at three guzzlers within the WSA.

Portions of the Whipple Mountains WSA were intensively used by prehistoric inhabitants. Some of the most concentrated distributions of culturally sensitive resources located in the Sonoran Desert are found in this area. The diversity of vegetation, wildlife and proximity of the area to the Colorado River accounts for the intensity of use. Ethnographic evidence documents the use of the entire eastern half of this WSA by Chemehuevi, Mohave and Halchidhoma Indians. Numerous areas of mythological associations plus burial, religious ritual and occupation sites are found in this area. The Whipple Mountains were used prehistorically by Native Americans to hunt bighorn sheep and deer and to gather native food-bearing plants. These mountains are also important to the Chemehuevi and Halchidhoma religious mythology.

Owing to the sensitivity of the resources, portions of the southeastern Whipple Mountains were identified in 1981 as an Area of Critical Environmental Concern (ACEC). The ACEC management plan for this area was completed in 1987, providing for the protection of the Native American, cultural and related natural resources identified within the ACEC.

Today, one teaching and research area exists within the WSA. It attracts frequent annual visits from college and university groups. The Whipple Mountains offer an excellent opportunity to closely study the marked climatic changes that have occurred in what is now desert. Packrat middens in the area contain organic materials from as long as 40,000 years ago. These record the existence of woodlands and forest communities, more common in a wetter climate that persisted until about 8,000 years ago.

Primary recreational participation involves camping, sightseeing, hunting, hiking, and nature study. Whipple Mountain (4130'), included on the Desert Peaks list of the Sierra Club, is regularly climbed by hikers.

The Whipple Mountains contain some of the desert's most scenic contrasting landforms and color displays. Landforms range from red-brown domed mountain peaks, spires, pinnacles, and natural bridges to brick-red sedimentary rock capped with gray-green sediment. Meandering washes and steep-walled canyons cut their way through the range. From the eastern peaks, a prominent regional landmark is visible: the brilliant blue Colorado River. The western side of the WSA offers panoramic views of Chemehuevi Valley, Chemehuevi Mountains and the Turtle Mountains. The variety of vegetation, including cacti, shrubs and trees, add to the scenic interest of the area.

The longest canyon is Whipple Wash, with a length of about 14 miles. The towering canyon walls rise over a thousand feet with craggy summits that are reminiscent of the walls of Zion Canyon in Utah. This Wash is one of the key destination points for visitors to the area.

B. Diversity in the National Wilderness Preservation System

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 45,090 acres of the American Desert/Creosote Bush-Bur Sage and 42,243 acres of the American Desert/Palo Verde-Cactus Shrub ecosystems. The WSA lies within a transition zone between the relatively higher, colder Mojave Desert and the lower, warmer Sonoran Desert. The vegetation in the area is sparse, a characteristic of the Mojave Desert, and is dominated by creosote bush scrub. Cactus scrub is also prominent locally. Unique to the area are a few natural stands of saguaro cactus.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas		Other BLM Studies	
	areas	acres	areas	acres
NATIONWIDE				
American Desert/Creosote Bush-bur Sage	3	126,033	48	1,527,001
American Desert/Palo Verde-Cactus Shrub	2	271,403	42	1,503,530
CALIFORNIA				
American Desert/Creosote Bush-bur Sage	2	26,427	20	932,540
American Desert/Palo Verde-Cactus Shrub	0	0	11	551,551

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of five major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a five-hour drive of the population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas		Other BLM Studies	
	areas	acres	areas	acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Riverside-San Bernardino	22	2,031,054	205	7,658,649
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The WSA is within 50 air miles of four BLM WSAs recommended for wilderness designation. Joshua Tree National Monument, managed by the National Park Service, is located approximately 120 miles southwest, contains the closest designated wilderness area.

C. Manageability

The Whipple Mountains WSA is manageable as wilderness. There are, however, a few issues that will complicate manageability.

Excluding the southern boundary, all other borders of the suitable portion are easily discernable, following mining access roads, section lines, and a power line road. The southern boundary, delineated only by the topography of the Whipple Mountains, will require signing and mapping to avoid unintentional intrusions by off-highway vehicles.

Within the suitably recommended borders, 2,279 acres of land belonging to the State of California are proposed for acquisition. These lands are in undeveloped, pristine condition and contain outstanding wilderness resources and desert bighorn sheep habitat. Acquisition of the State of California lands would enhance the protection of these resources and improve the overall manageability of the wilderness area.

The Whipple Mountain Habitat Management Plan calls for the construction of four guzzlers within the suitably recommended area over the next four years. These permanent installations to maintain conditions for wildlife, primarily desert bighorn sheep populations, are compatible with the preservation of the wilderness character and consistent with wilderness management objectives. They represent the minimum tools necessary to accomplish the task of reestablishing a healthy, stable, and vigorous herd of desert bighorn sheep in the Whipple Mountains. Once designated wilderness, and administrative determination will be made to provide for maintenance of these guzzlers.

The suitable area contains 122 unpatented mining claims. Those mining claims that prove valid will retain rights to continue with mining activities that are necessary and reasonably incidental to the mining operation, even after designation occurs. The only restrictions placed on these activities is that they not cause unnecessary or undue degradation, leaving sufficient latitude to cause severe impacts to surrounding wilderness values. This issue has the potential to gravely complicate BLM's ability to manage the Whipple Mountains as wilderness.

In the southeast corner of the WSA, in the suitable area, lies a small portion of the Colorado River Aqueduct. In this location, the aqueduct is underground, passing through a tunnel. However, over the long-term, maintenance of this aqueduct may require surface disturbance. The fact that this structure is included in the study area represents another manageability problem.

The nonsuitable area also contains mining claims and State lands and, therefore, would be subject to the same management concerns as stated for the suitable portion of this WSA.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Whipple Mountains WSA is located in the BLM Whipple Mountain Geology-Energy-Mineral (G-E-M) Resource Area (GRA). The G-E-M information in the wilderness portion of the CDCA Plan EIS (Volume B, Appendix III) indicated a potential for copper, gold, silver, lead, manganese, thorium and uranium.

   Near the eastern part of the WSA, the new American Eagle Mine produced 122,194 pounds of copper and the Stewart Mine produced 18,830 pounds of manganese. Just in and out of the western boundary of the WSA the Monument King and Moulton Mines respectively produced 144,936 pounds of manganese and an unknown amount of copper. The Copper Basin Mine had demonstrated reserves of 14.4 million pounds of copper ore. An unknown amount of silver and lead had also been reportedly produced from within the WSA. There have been numerous copper shows in the WSA but information is scarce and incomplete. Geochemical sampling showed anomalies for silver, lead, zinc, molybdenum, tin, uranium, and thorium. An undetermined amount of unpatented mining claims existed along the northern, eastern and southwestern boundaries of the WSA in December, 1979.

   This information is supported by the 1980 BLM GRA file.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should Be Considered in the Final Recommendation: The U.S. Bureau of Mines (BOM) and the U.S. Geologic Survey conducted mineral surveys of the suitable portion of the WSA in 1980 and 1981. The BOM released a report of their activity in 1982 (MLA-25-82). The results of these surveys were published as Open File Report 82-956, released in 1982.

   The report indicated that the mineralized zones in the WSA are predominately associated with either a detachment fault system or granitic plutons. The major mineralization occurs along the perimeter of the WSA with only minor mineralization toward the center. Along the western boundary of the WSA, the Whipple Mountain detachment fault system was found to have a moderate to locally high potential for the occurrence of gold, silver, copper, arsenic, and/or molybdenum. This mineralization occurs on both the upper and lower fault plates. An area in the eastern most portion of the WSA has a high potential for gold, silver and copper. Along the southeast boundary, an area with moderate potential for the occurrence of gold, silver, and copper, and one small area of high potential for the occurrence of copper can be found. These zones are associated with the granitic plutons. Two areas of moderate potential for the occurrence of uranium are located in the central and eastern portions of the WSA. This classification is based on aerial anomalies and scintillometer readings taken during field visits.

Two areas, one located along the north boundary and one on the east side, have moderate potential for the occurrence of manganese resources. A small area on the north side had a high potential for the occurrence of manganese.

The report also identified a potential for the occurrence of sand and gravel, rip-rap, and decorative building stone. Small deposits of sand and gravel are located in washes and alluvial fans throughout the area. Rock, suitable for crushing or for rip-rap is found throughout the central portion of the WSA in isolated pockets. A small area in the southern portion was found to contain over 1,000 tons of decorative rock material. Although these resources have been identified, their limited quantity suggests that their value is marginal.

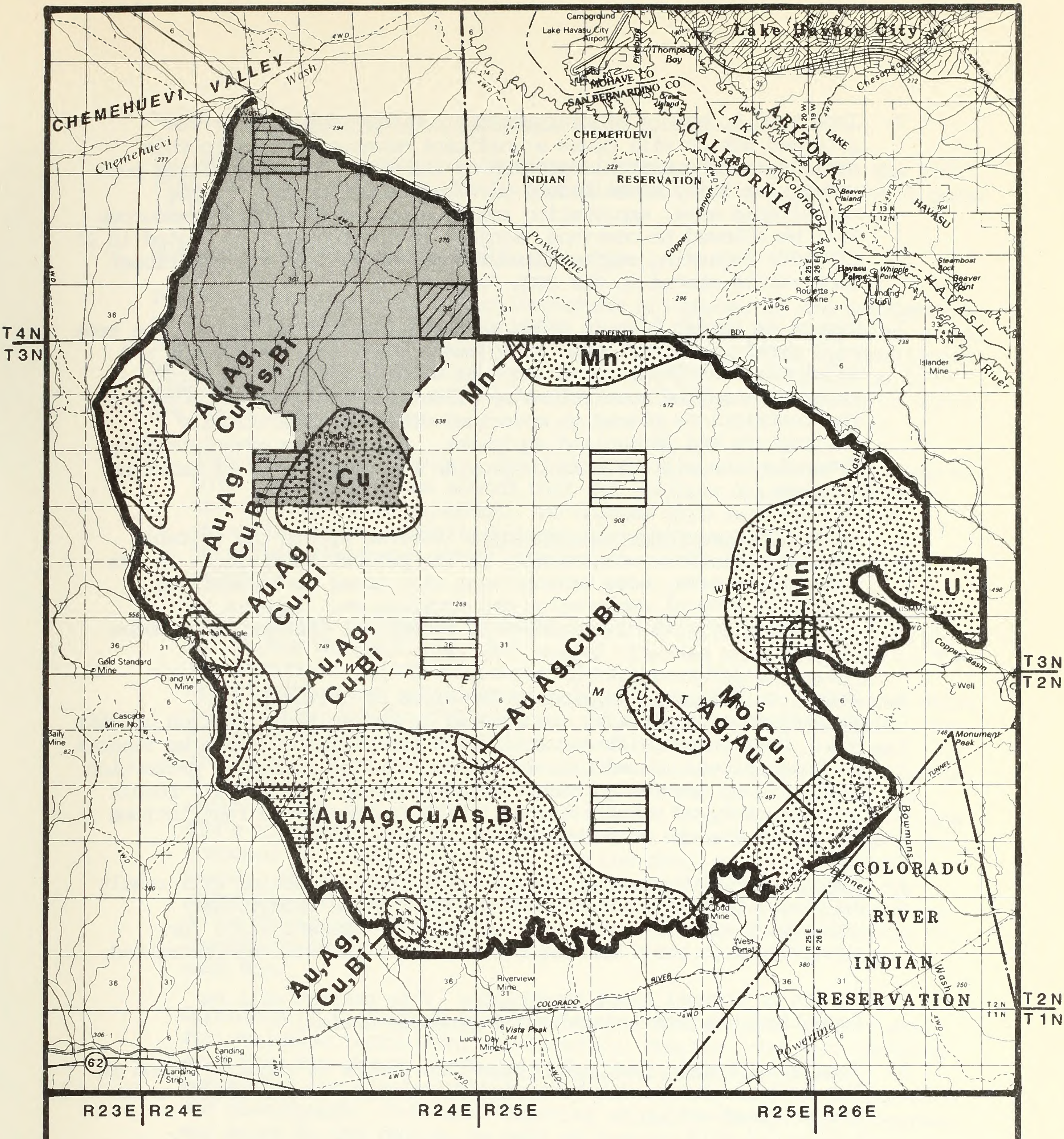
Unpatented lode mining claims in the WSA are concentrated in the east, southeast and south-central portions of the WSA. Most unpatented placer mining claims are concentrated in the recommended nonsuitable north-central portion of the WSA. Two unpatented placer claims are located in the south-central recommended suitable portion of the WSA. Unpatented mining claims located in the WSA are summarized in the following table taken from BLM records dated December, 1987.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	120	0	120	2,400	0	2,400
Placer	2	16	18	80	640	720
Mill Site	0	0	0	0	0	0
Total	122	16	138	2,480	640	3,120

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: In the suitable area, with the exception of localized impacts caused by development of valid mining claims, wilderness values will be maintained. In the nonsuitable area, mineral exploration/development and OHV use will cause localized impacts to naturalness. Opportunities for solitude and for primitive and unconfined types of recreation will be adversely impacted along designated routes of travel by the continued use of motorized vehicles. In the nonsuitable area, approximately 15 miles of routes will remain open.


CHEMEHUEVI VALLEY
Chemehuevi Wash
Lake Havasu City
Lake Havasu City Airport
Campground
Thompson Bay
MOHAVE CO
SAN BERNARDINO CO
CHEMEHUEVI INDIAN RESERVATION
ARIZONA
CALIFORNIA
LAKE HAVASU
Colorado
Copper Canyon
Powerline
Beaver Island
Havasu Palms
Whipple Point
Steamboat Rock
Beaver Point
Roulette Mine
Landing Strip
Islander Mine
River
INDEFINITE BDY
T4N
T3N
T2N
T1N
R 20 W
R 19 W
R 25 E
R 26 E
Au,Ag,Cu,As,Bi
Au,Ag,Cu,Bi
Mn
Cu
U
Mo,Cu,Ag,Au
Vista Pacific Mine
American Eagle Mine
Gold Standard Mine
D and W Mine
Cascade Mine No 1
Baily Mine
WHIPPLE MOUNTAINS
Copper Basin
Well
Monument Peak
TUNNEL
Bowmans Wash
COLORADO RIVER INDIAN RESERVATION
West Portal
Riverview Mine
COLORADO RIVER
Lucky Day Mine
Vista Peak
62
4WD
R23E
R24E
R25E
R26E

▭	Recommended for Wilderness
▩	Recommended for Non Wilderness
▦	Land outside WSA Recommended for Wilderness
▥	Split Estate
▤	State
▨	Private

Explanation

▧	High Potenial for the Occurrence of Energy and/or Non-energy Minerals
░	Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M	Moderate Mineral Potential Location in a High Mineral Potential Area
H	High Mineral Potential Location in a Moderate Mineral Potential Area

Commodity Symbols

Ag	Silver
As	Arsenic
Au	Gold
Bi	Bismuth
Cu	Copper
Mn	Manganese
Mo	Molybdenum
U	Uranium

0 1 2 3
MILES

N

Whipple Mountains
Mineral Resource Pontential

MAP-2
CDCA-312

2. Impact on Locatable Mineral Exploration and Development: The proposed action will cause significant adverse impacts to this activity in the suitable portion of the WSA. Existing claims must undergo validity exams before development can occur. In the nonsuitable area, exploration and development of mineral resources will be allowed to continue, subject to the regulations stated in 43 CFR 3809 regarding surface disturbance, as well as any additional constraints stated in the CDCA Plan.

3. Impact on Desert Bighorn Sheep/Habitat: Habitat throughout the area will remain essentially in its present condition. Placement and maintenance of improvements such as water guzzlers, and herd management may be constrained by wilderness designation because of the restrictions placed on motorized vehicles, specifically helicopters and mechanized equipment. However, an administrative determination will be made to provide for maintenance of existing guzzlers.

4. Impact on Desert Tortoise/Habitat: Habitat within the suitable portion will remain essentially in its present condition. In the nonsuitable area, some habitat loss will occur as a result of potential mineral exploration and development. Impacts to individual animals will consist of occasional disruption by human intrusion.

5. Impact on Cultural Resources: The areas of cultural significance/sensitivity are located in the suitable portion of this WSA. Designation will result in both beneficial and adverse impacts to these sites. Beneficial impacts consist of increased protection under wilderness designation. Slight adverse impacts will result because study of these sites will be hampered by the restrictions placed on the use of mechanized equipment.

6. Impact on Native American Values: The proposed action will result in slight beneficial impacts by preserving the traditional collection areas and ritual sites in their present state for generations to come. However, access to sites will be restricted.

7. Impact on Unusual Plant Assemblage: This habitat will be essentially maintained under the proposed action.

8. Impact on Saguaro Cactus Habitat: The stands of saguaro, found in the suitable area, will be afforded a measure of protection under the proposed action.

9. Impact on Grazing: The proposed action will have no impact on this activity.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Inaccuracies that are known to exist are noted in parentheses.

1. Inventory Phase: Several public comments were received which agreed with the findings but stated that the southern boundary should be the Colorado River Aqueduct. No changes were made because of extensive mining activity between the southern boundary of the potential wilderness study area and the northern boundary of the Aqueduct.

2. Study Phase: Of the 33 comments received on this WSA, 20 favored wilderness designation. This rugged area was said to be one of the top potential desert wilderness areas, providing excellent opportunities for solitude and primitive recreation. Features cited include the variety of landforms, geologic study opportunities, the blending of Colorado and Mojave desert terrains, and flora and fauna, including one of the few saguaro cactus stands in California. A large number of those who commented wanted to include in the suitable area the southern portion of the WSA, disagreeing with the BLM's identification of certain "roads." This area was said to be composed of rolling hills with numerous deep, thickly vegetated washes, the combination providing outstanding opportunities for primitive and unconfined recreation such as hiking and backpacking up to the Whipple Mountains. One respondent proposed combining the Chemehuevi Valley with the Whipple and Turtle Mountains into one vast WSA.

   Opponents of wilderness mentioned the attractiveness of this area for vehicular recreation, rockhounding, camping, and just "getting away from the crowds." The need for vehicular access was emphasized, particularly by those interested in mineral exploration and development. Potential deposits of gold, silver, and manganese may exist in the region, as well as copper which has been found in the nearby Copper Basin Reservoir. Concern was expressed by Texaco Corp. for the area's unexplored potential for oil, gas, and geothermal resources. The Bureau of Reclamation wanted to keep suitable quarries on the east face of the Whipples open as possible sources of rock for flood reclamation purposes. They also wanted consideration given to the proposed Whipple Wash Pump-Storage Project (this project is no longer under consideration).

Sights and sounds which were said to detract from wilderness quality were aircraft flyovers, boats, lights from the communities of Earp, Parker and Lake Havasu City, and the Colorado River Aqueduct. One person described the area as a "worthless, remote, ugly, hot and dry piece of rock."

One comment, received in response to the Public Input Workbook (3/15/79) recommended maintaining existing uses pending final designation of the area as wilderness.

3. Draft Plan Alternatives: A variety of comments specific to WSA 312 were received in response to the Draft Desert Plan Alternatives. Several agreed with the Protection Alternative. One comment wanted more wilderness, Chemehuevi Valley in particular. One comment disagreed with the Balanced Alternative - no wilderness should be designated. General comments and suggestions included: mention of the substantially noticeable impacts of man within the WSA; designation of the area as a geologic ACEC, rather than as wilderness; and creation of a buffer zone around wilderness.

   The National Outdoor Coalition (NOC), a coalition of mining, rockhounding, and off-highway vehicle groups, was in agreement with conservation groups on this WSA, both recommending that it be designated wilderness. Hundreds of letters were received from the many organizations under these two umbrellas.

   The State Office of BLM in Arizona wrote that the Whipple Mountains have been the subject of exploratory drilling for minerals and may contain mining claims that pre-date the Federal Land Policy and Management Act and would be problems for wilderness management.

4. Proposed Plan: The issues raised by the Draft Plan Alternatives were again topics of discussion in response to the Proposed Plan and Final EIS. Potential mineralization of the Whipples and existing mining claims were believed to be detrimental to wilderness management. Two mining claimants spoke of roads crisscrossing the terrain and the lack of "true wilderness." The U.S. Bureau of Reclamation reminded BLM about the Whipple Wash Pump-Storage Project which was in the feasibility study stage (this project is no longer under consideration). This proposed three reservoir hydroelectric facility would be in a portion of the Whipples recommended as suitable for wilderness.

   There were a few requests to ban livestock grazing and ORV use in the area. Burros were also an issue. Respondents urged that the population be reduced to zero in the Whipple Mountains so that the bighorn could be reintroduced into this historic range.

   No comments were received from local governments.

5. 1981 CDCA Plan Amendments: In 1981 a proposal was made to add a new grazing allotment in the area just north of the portion of this WSA recommended as suitable. The northwest corner of the WSA fell within this area. The amendment was approved.

Fifteen letters were received in response to this proposal, four in favor and eleven opposed. One person favoring approval stated that the allotment had apparently been overlooked in the original surveys and that it would be unfair to penalize the people who claimed to have been grazing in the area for decades. Another said that if the allotment is approved, BLM should require that one burro be removed for each ten cattle authorized.

Most of the people who opposed the grazing allotment were concerned about potential impact on the desert tortoise; since this species is found further north in the Fenner-Chemehuevi Valley, this argument was not relevant to this WSA. Others mentioned the danger to the resources of soil and wildlife.

APPENDIX 1

ESTIMATED COSTS OF ACQUISITION OF NON-FEDERAL HOLDINGS WITHIN AREAS RECOMMENDED FOR DESIGNATION

WHIPPLE MOUNTAINS WSA (CDCA-312)

PARCEL No.	LEGAL DESCRIPTION TWNSHP	RNG	SEC	MERIDIAN	TOTAL ACREAGE	NUMBER OF OWNERS	TYPE OF OWNERSHIP BY ESTATE SURFACE ESTATE	SUBSURFACE ESTATE	PRESENTLY PROPOSED FOR ACQUISITION	PREFERRED METHOD OF ACQUISITION	ESTIMATED COST OF ACQUISITION LAND COSTS ($1000)	PROCESSING COSTS ($1000)
1	2N.	24E.	5	SBM	40	1	PRIVATE	PRIVATE	YES	PURCHASE	2.0	2.5
2	2N.	24E.	16	SBM	480	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
3	3N.	24E.	36	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
4	3N.	25E.	16	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
5	3N.	25E.	36	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
6	2N.	25E.	16	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0

These figures were derived from Bureau Land Records and provide for more detail than GIS estimates and therefore may differ from acreage summaries in Table 1.

Big Maria Mountains

CDCA 321

BIG MARIA MOUNTAINS WILDERNESS STUDY AREA (WSA)

(CDCA-321)

1. THE STUDY AREA --- 70,533 acres

The Big Maria Mountains WSA is located in the extreme eastern end of Riverside County, in the southern portion of the California Desert Conservation Area (CDCA). Blythe, located ten miles south of the WSA, is the nearest city. The WSA includes 66,529 acres of BLM lands, State owned inholdings totalling 3,376 acres and 628 acres of private land. The area contains no split estate properties (see Map 1 and Table 1).

The WSA consists of two distinct, noncontiguous sections: one surrounding the Riverside Mountains to the north, the other encompassing the Big Maria Mountains farther south. The areas are separated by a major drainage known as Big Wash which is not a part of the WSA. Running north to south, the WSA roughly parallels State Highway 95 and the Colorado River, both of which run along its eastern edge.

The boundaries of each portion are defined by contours, section lines and topographic features. The northern portion is bounded on the west by an unnamed wash running in a north-south alignment and a portion of a powerline right-of-way. To the south, the boundary parallels Big Wash. To the east section lines, the CDCA boundary, and then contours of the Riverside Mountains mark the WSA's edge. To the north, the boundary follows mountain contours and a wash.

The larger, southern portion's boundaries are as follows: to the north, contours of the Big Maria Mountains delineate the WSA; to the west, the boundary follows a powerline right-of-way and then the edge of the mountains; the southern boundary follows a second powerline, this one trending east-west; and to the east, the boundary runs along the base of the mountain, excluding areas of surface disturbance.

The terrain of both segments varies from gently sloping bajadas to steep, rugged interiors. Washes, emerging from the mountains' canyons and clefts, dissect the bajadas below. Both ranges fall within the broad classification of American Desert Province and contain plant communities characterized by creosote bush, burrobush, ocotillo, and beavertail, cholla, and barrel cactus over most of the area, with palo verde and ironwood in the washes. Elevation varies in the Riverside Mountains from approximately 400' on the southern bajada to nearly 1,200' in the rugged interior. There are numerous peaks in this small mountain chain, lending to its rough, craggy appearance. Equally as rough are the Big Maria Mountains. This larger mountain chain three miles to the south, consists of numerous peaks disjoined by steep canyons. The elevation varies from 500' on the flat bajada along the eastern edge to western peaks reaching to 3,400 feet.

There are two WSAs, administered by Arizona BLM, that adjoin the Big Maria Mountains WSA. The Big Maria Mountains Northern Addition WSA (AZ-050-18) is a small area of only 415 acres. It abuts the southeast corner of the northern portion of the Big Maria WSA. The second area, Big Maria Southern Addition WSA (AZ-050-19) is larger, 1,420 acres, and is adjacent to the eastern boundary of the southern portion containing the Big Maria Mountains. Since both of these WSAs will be discussed separately in reports specific to each area, no further discussion of them will occur in this report.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EIS) for the CDCA Plan: protection, use, balanced, and no action; a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

0	acres recommended for wilderness
66,529	BLM acres recommended for nonwilderness

No wilderness is the recommendation for this WSA. The entire acreage in this WSA is released for uses other than wilderness. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

For the purpose of clarity, throughout the rest of this report the northern portion of the WSA will be referred to as Segment A and the southern portion will be referred to as Segment B.

The WSA is recommended as nonsuitable for wilderness designation because its mineral resource potential and opportunities for motorized recreation outweigh the area's wilderness values. Although the area possesses wilderness values that adequately satisfied the criteria set forth in Section 2(c) of the 1964 Wilderness Act, they are not distinctive enough to override the area's other uses nor warrant inclusion into the National Wilderness Preservation System (NWPS).

The Big Maria Mountains, Segment B, has areas of high potential for the occurrence of gold, wollastonite and limestone and areas of moderate potential for copper, lead, silver, uranium and thorium. Decorative stone, used as a building material, has been gathered in the Big Maria Mountains (Segment B) for years and was the primary cause of many areas being excluded from the WSA boundary. Within Segment A, the Riverside Mountains, high potential exists for gold, silver and gypsum occurrences, and moderate potential exists for occurrences of copper, manganese, molybdenum, and lead. Historically, the Riverside and Big Maria Mountains have supported a number of mining operations. A variety of minerals have been extracted from this area since 1867. More than 1,100 claims were filed in this area before 1929. BLM records show 683 unpatented mining claims are active within the boundaries of the WSA.

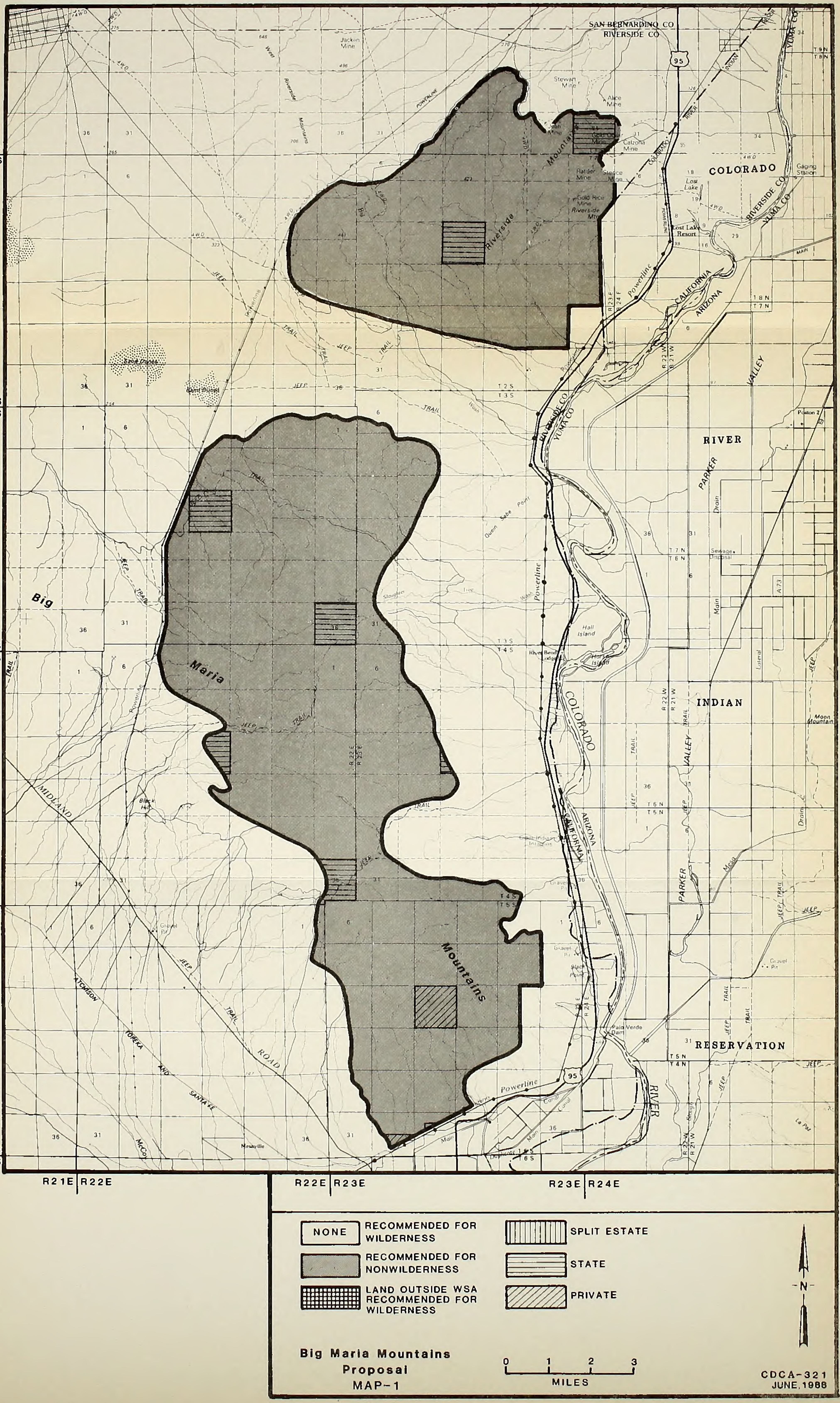
The mountains have also become a major attraction for off-highway vehicle users travelling from camps along the Colorado River. As increased recreational opportunities develop along the river, pressure to utilize this area for motorized recreation will increase. The major access point is through Big Wash. While the routes through this area are rough enough to preclude use by many vehicles, their challenging nature is enjoyed by many off-highway vehicle enthusiasts. One point of destination, a captured sand dune on the west face of the Big Maria Mountains, attracts hundreds of ATV riders each season. In comparison to other recreation areas in the CDCA, recreational use of this area is light, but steadily increasing. There are approximately 23 miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use.

When weighed against these uses, the area's wilderness values fall short. Little primitive and unconfined recreational use takes place in this WSA. Activities are limited to occasional backpackers and hikers. Use of this type is limited to a short winter season since lack of water in the area and extreme summer temperatures make the area uncomfortable at best and at worst, fatal. Naturalness of both segments has been affected by past mining activities and motorized recreation. The condition of the mining areas after they were abandoned differ but evidence of old routes, structures, and debris is not uncommon. Only in the rugged interior of both segments is man's work substantially unnoticeable. Within the WSA, opportunities for solitude vary. Isolation is virtually assured within the rugged interior, however, on the bajadas, secluded areas are hard to locate. In the vicinity of the washes supporting off-highway vehicle use, unbuffered sounds could reduce the quality of the experience.

In terms of uniqueness, the landforms and ecosystems are reflected in the surrounding mountains and are typical of most mountainous areas within the eastern portion of the California Desert. Designation of this WSA as wilderness would add little to the overall balance of the NWPS.

This WSA does possess some special features. Within the area are two BLM sensitive plant species: foxtail cactus and California barrel cactus. Both species are currently candidates for Federal listing as either threatened or endangered. Cultural resource sensitivity is high in Segment B, the Big Maria Mountains. This area is thought to have been used extensively by aboriginal cultures, though only a few prehistoric sites have been recorded.

This area, Segment B, is also of value to Native Americans, namely the Colorado River tribal groups. These special features will be protected by the management guidelines which will be implemented in this area and by strict Federal and State laws already in place.



SAN BERNARDINO CO
RIVERSIDE CO
YUMA CO
95
Jackiin Mine
West Riverside Mountains
Stewart Mine
Alice Mine
Gold Coin Mine
Calzona Mine
Rattler Mine
Steece Mine
Gold Rice Mine
Riverside Mtn
Big Riverside Mountains
COLORADO
RIVER
Gaging Station
Lost Lake
Lost Lake Resort
RIVERSIDE CO
YUMA CO
CALIFORNIA
ARIZONA
POWERLINE
Powerline
4WD
JEEP
TRAIL
Sand Dunes
T1S
T2S
T2S
T3S
T3S
T4S
T4S
T5S
T5S
T6S
T9N
T8N
T8N
T7N
T7N
T6N
T6N
T5N
T5N
T4N
R23F
R24F
R22W
R21W
R22E
R23E
PARKER
VALLEY
Poston 2
Drain
Sewage Disposal
Main
Queen Sabe Point
Slaughter
Hall Island
Horse Island
River Bend Lodge
Big
Maria
Mountains
INDIAN
RESERVATION
Moon Mountain
MIDLAND
Black Hill
Gravel Pit
ATCHISON
TOPEKA
AND
SANTA FE
ROAD
McCoy
Mesaville
Palo Verde Dam
Black Point
Canal
Lateral
Mesa
La Paz
R21E
R22E
R22E
R23E
R23E
R24E
NONE
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES

Big Maria Mountains Proposal
MAP-1

CDCA-321
JUNE, 1986

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	66,529
Split Estate	(BLM surface only)	0
Inholdings		
State		3,376
Private		628
Total		70,533

Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	0
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		0
Inholdings		
State		0
Private		0

Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	66,529
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		66,529

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The area's naturalness has been eroded by over a century of mining activity and many decades of motorized recreational activity. Outlying portions of this WSA contain areas where man's own works are very evident within the landscape. Scars of areas scraped by bulldozers, adits and the accompanying sloughed waste, and countless vehicle tracks mar the area's natural beauty. Only the interior areas retain their true primitive character and still enjoy outstanding naturalness.

2. Solitude: The areas are large with varied terrain so, depending on the location, the opportunities for solitude can vary. In the rugged interior, isolation from outside influences can easily be achieved. However, on the flat bajadas, screening is marginal. Here, only in the washes is there sufficient vegetation to allow for a sense of seclusion. The sounds of recreational vehicles, operating outside of the WSA, will significantly reduce solitude on the bajadas.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: The interior portions of this WSA are extremely rugged and hikers and backpackers face many physically demanding experiences. The most limiting factor is the lack of available water. Recreationists must carry whatever amount they will need for their stay. Extreme summer heat and low humidity basically preclude this area from use except in the cool winter season. Despite these limitations and a current low use level, opportunities for primitive and unconfined types of recreation are considered to be outstanding in the areas' interior. Both areas are free of restrictions and can provide many areas for unconfined recreation.

4. Special Features: There are some special features of this WSA that merit attention. There are two BLM sensitive plant species: foxtail cactus,(Coryphantha vivipara var. alversonii) and California barrel cactus,(Ferocactus acanthodes var. acanthodes). Both foxtail cactus and California barrel cactus are threatened by private and commercial collecting and are currently candidates for Federal listing as threatened or endangered. The Riverside Mountains (Segment A) supports a declining population of burro deer. Loss of habitat along the river is the suspected cause of that species' decline. There are three existing big game guzzlers within the WSA. These guzzlers were constructed by the California Department of Fish and Game to provide permanent water for the deer herd.

   Segment B, the Big Maria Mountains, is thought to have been an area of greater than usual aboriginal occupation and/or use, but few prehistoric sites have been recorded here. The low number of recorded sites may be a factor of the rugged terrain and low level of archaeological investigation. Important site complexes have been recorded on the flanks of the Big Marias and aboriginal trails are known to run into the mountains from both the east and west. For this reason, much of this portion of the WSA is rated as having high sensitivity for cultural resources. Of the recorded archaeological sites, only about half are associated with prehistoric cultural resource. The remaining sites are related to the historic mining activities of the area. Segment A has few recorded archaeological sites, most of which are associated with historic mining remains.

Related to the area's cultural resource, the Big Maria Mountains as a whole (Segment B) are valued by the Colorado River tribal groups. These mountains are a traditional occupation area. Villages and associated burial areas have been reported within the WSA. There are also associations with the intaglios or geoglyphs located between the Colorado River and the mountains, outside of the WSA. There are no known areas of particular Native American value or concern in the Riverside Mountains (Segment A).

B. Diversity in the National Wilderness Preservation System (NWPS)

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 55,965 acres of the American Desert/Palo Verde-Cactus Shrub and 10,564 acres of the American Desert/Creosote Bush-bur Sage ecosystem. The Big Maria Mountains WSA would not increase the diversity of the types of ecosystems represented in the NWPS.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PVN	NWPS Areas areas	NWPS Areas acres	Other BLM Studies areas	Other BLM Studies acres
	NATIONWIDE			
American Desert/Palo Verde-Cactus Shrub	2	271,403	42	1,489,696
American Desert/Creosote Bush-bur Sage	3	126,033	48	1,561,484
	CALIFORNIA			
American Desert/Palo Verde-Cactus Shrub	0	0	11	537,717
American Desert/Creosote Bush-bur Sage	2	26,427	20	967,023

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five hour drive of six major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a five hour drive of the population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS areas areas	NWPS areas acres	Other BLM Studies areas	Other BLM Studies acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: Joshua Tree Wilderness Area, administered by Joshua Tree National Monument, located 40 miles to the west, is the closest designated wilderness areas. However, there are 18 BLM suitably recommended study areas within 50 miles, many representing the same ecosystem and landforms as found within the Big Maria WSA.

C. Manageability

The Big Maria WSA is manageable as wilderness, but only with great difficulty. The Riverside Mountain range and the Big Maria Mountain range are separated by Big Wash. With few exceptions, the boundaries of either unit are not well defined on the ground. For the most part, the borders of the WSA were established along section lines, contour lines and occasionally, topography. Extensive signing would be needed to adequately manage the boundaries.

Presently, three big game guzzlers are located within the WSA. Maintenance is required approximately two times per year and requires mechanized euqipment and vehicles for transportation of materials to the site.

Recreational use of the Colorado River is rapidly increasing. The Big Wash area attracts many of the OHV users that camp on the river. Ways, developed in support of early mining operations, lace the bajadas of both ranges. Although few penetrate the study area, they provide easy access to the boundaries for the increasing numbers of off-highway vehicle recreationists. As this use increases, management of the area for wilderness will become even more difficult.

The potential for mineral development within the WSA is high. If developed, noise, surface disturbance and related access needs will make management of the WSA for wilderness difficult.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known At the Time of the Preliminary Suitability Recommendation: The Big Maria WSA is located in the BLM Big Maria Geology-Energy-Mineral (G-E-M) Resource Area (GRA). The G-E-M information in the wilderness portion of the CDCA Plan EIS (Volume B, Appendix III) indicated that the WSA had a high potential for mineralization. In the northern portion, there was past production of gold, silver, and copper, plus several manganese deposits. The eastern portion of the Riverside Mountains was considered as having a high potential for gold, silver, copper, and manganese. Indications of a moderate to speculative potential for uranium, thorium, manganese, gold, lead, zinc, iron, silver, molybdenum, and the industrial mineral limestone, silica, and gypsum were identified in the southern portion of the WSA. In their comments to the draft EIS, the U.S. Water and Power Resources Service indicated a possible need for rip-rap sources on the east side of the WSA.

   Data in the 1980 GRA files indicate that the WSA encompasses two highly mineralized mountain ranges, the Big Maria Mountains and the Riverside Mountains. The rock formations and geology of these mountains are similar. These mountains consist predominately of Precambrian granite and gneiss in faulted contact with pre-Cretaceous and Paleozoic metamorphosed rock, principally marbles. Data from the 1980 GRA files indicated that areas in the northwest portion and on the east side of the Riverside Mountains have a high potential for the occurrence of gold, silver, and manganese in replacement deposits in limestone. These deposits, up to 15 feet thick, were developed from mines in the Bendigo gold mining district. A high potential for the occurrence of gypsum was indicated by the 1980 GRA for the eastern Riverside Mountains. A moderate potential area, from 1980 GRA files, for the occurrence of uranium was indicated from gamma-ray anomalies associated with Triassic-age intrusive rocks in the central portion of the Big Maria Mountains.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should Be Considered in the Final Recommendation: The U.S. Bureau of Mines (BOM) released a summary report of their investigation of the WSA in Open File Report MLA 142-82 in 1982. No mineral survey has been conducted in the WSA by the U.S. Geological Survey. The BOM report supports the 1980 GRA data. Both the Big Maria Mountains and the Riverside

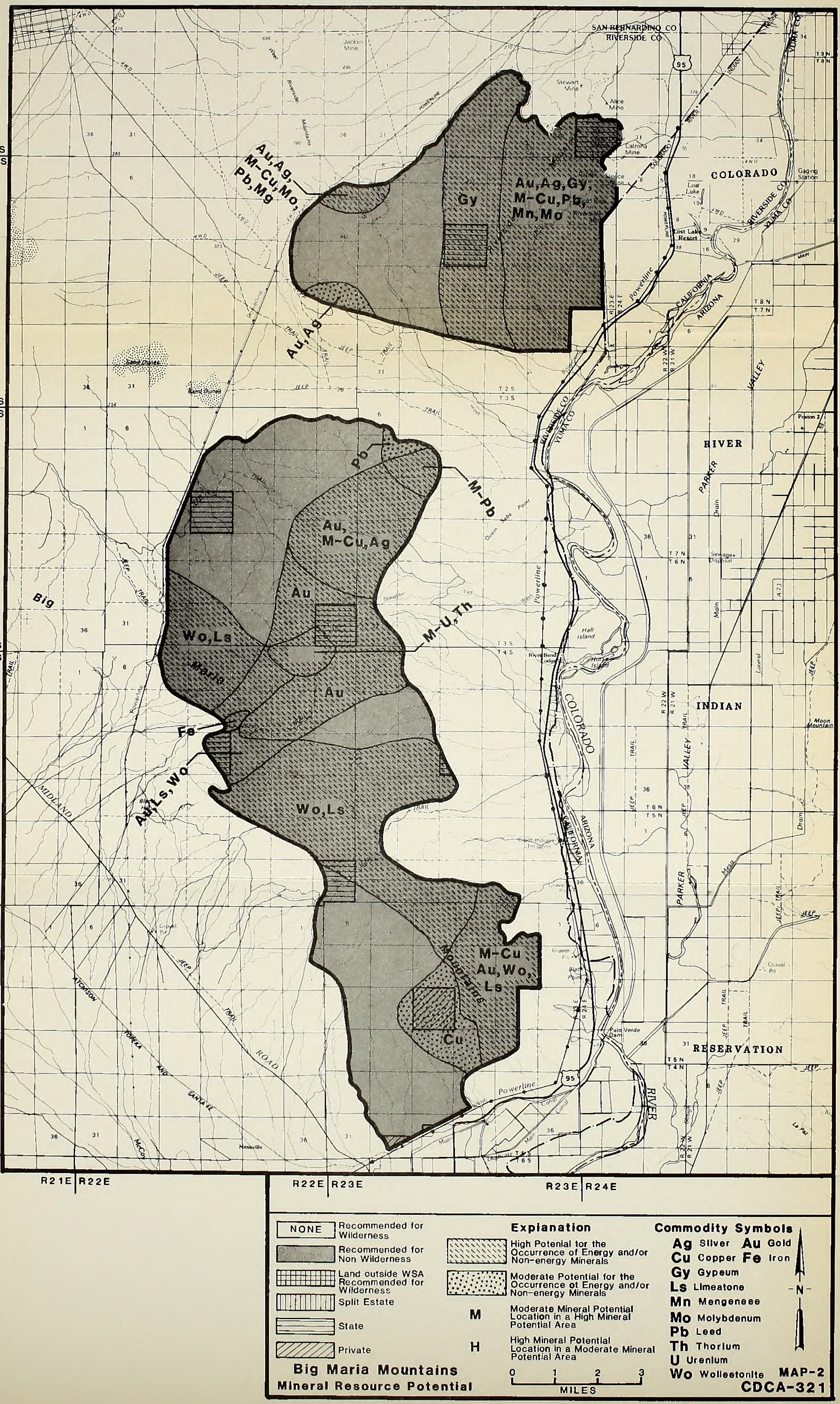
Mountains have areas of moderate to high potential for precious and strategic metals under the BLM mineral classification system. The report indicates that twelve properties in the east side of the Riverside Mountains have moderate to high potential for the occurrence of silver, gold, copper, and molybdenum under the BLM classification system. In addition, the BOM report indicates that six properties in the Big Maria Mountains have a moderate potential for the occurrence of zinc, lead, copper, silver, and a high potential for the occurrence of iron, limestone, and building stone. Four properties in or near the south portion of the WSA have low grade gold, silver,and copper resources totalling more that 300,000 tons. An estimated 29 million tons of limestone and dolomite, and 620,000 long tons of iron ore were identified in the Big Maria Mountains by BOM. Most deposits were found to be in fault/shear zones and some are associated with intrusive dikes or hydrothermal quartz veins. In the Riverside Mountains, copper, manganese, molybdenum, lead, zinc and/or iron are often associated with gold and silver deposits.

Numerous quarries exist on the western slopes of the Big Maria Mountains for both wollastonite and marble. Several properties have been patented immediately west of the WSA boundary. These minerals have industrial uses as food additives, and in the manufacture of iron and cement. The limestone and wollastonite minerals extend across from the southwest corner to the west central portion of the Big Maria Mountains in the WSA. Towards the south portion of the WSA, deposits are reported to consist of almost pure marble, while the beds to the north consist of pure wollastonite. Marble and wollastonite deposits in the Big Maria Mountains portion of the WSA have a high potential for occurrence under the BLM classification system.

The decorative stone mentioned in the BOM report, driftwood rock, is a surface deposit resulting from the weathering of wollastonite and limestone outcrops. These deposits occur as surface sluff rock on the hill sides. It is gathered and sorted by hand from hill sides and sold to rock retailers, locally. Unpatented mining claims located in the WSA are summarized in the following table taken from BLM records dated December, 1987.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	N/A	655	655	N/A	13,100	13,100
Placer	N/A	28	28	N/A	1,120	1,120
Mill Sites	N/A	0	0	N/A	0	0
Totals:	N/A	683	683	N/A	14,220	14,220


SAN BERNARDINO CO
RIVERSIDE CO
YUMA CO
95
Jackin Mine
Stewart Mine
Alice Mine
Calzona Mine
COLORADO
RIVER
Lost Lake
Lost Lake Resort
Gaging Station
RIVERSIDE CO
YUMA CO
CALIFORNIA
ARIZONA
T9N
T8N
T7N
T6N
T5N
T4N
T1S
T2S
T3S
T4S
T5S
T6S
R23E
R24E
R22W
R21W
Au,Ag,
M-Cu,Mo,
Pb,Mg
Gy
Au,Ag,Gy,
M-Cu,Pb,
Mn,Mo
Au,Ag
Sand Dunes
Powerline
JEEP
TRAIL
4WD
Wash
Riverside
Mountains
VALLEY
RIVER
PARKER
Poston 2
Pb
M-Pb
Quien Sabe Point
Au,
M-Cu,Ag
Au
M-U,Th
Big
Wo,Ls
Maria
Au
Fe
Au,Ls,Wo
Wo,Ls
MIDLAND
Hall Island
River Bend Lodge
Horse Island
COLORADO
INDIAN
Moon Mountain
Drain
Main
Lateral
ARIZONA
CALIFORNIA
PARKER
Mesa
Gravel Pit
M-Cu
Au,Wo,
Ls
Mountains
Cu
Black Point
Palo Verde Dam
RESERVATION
ATCHISON
TOPEKA
AND
SANTA FE
ROAD
Mesaville
McCoy
Canal
RIVER
La Paz
R21E
R22E
R22E
R23E
R23E
R24E
NONE Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potential for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
0 1 2 3
MILES
Commodity Symbols
Ag Silver
Au Gold
Cu Copper
Fe Iron
Gy Gypsum
Ls Limestone
Mn Manganese
Mo Molybdenum
Pb Lead
Th Thorium
U Uranium
Wo Wollastonite
N

Big Maria Mountains
Mineral Resource Potential

MAP-2
CDCA-321

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Naturalness and opportunities for solitude in both segments will be significantly reduced by localized to extensive impacts surrounding mineral development. This is likely to occur in the areas of high and moderate mineral potential, roughly 75% of the entire WSA. Adverse impacts to solitude and a reduction in quality of primitive and unconfined types of recreation will occur along approximately 20 miles of designated routes of travel which will remain open.

2. Impact on Locatable Mineral Exploration and Development: Opportunities for exploration and development of locatable minerals will continue to be available, subject to the regulations stated in 43 CFR 3809 regarding surface disturbance as well as any additional constraints listed in the CDCA Plan.

3. Impacts on Deer/Habitat: Impacts on deer and their habitat will be negligible, consisting of insignificant habitat loss caused by mineral development. Management guidelines, mitigating measures and stipulations will provide adequate protection for this species.

4. Impact on Motorized Recreation Opportunities: Opportunities for motorized recreation will continue on approximately 20 miles of designated routes of travel.

5. Impact on Cultural Resources: Some loss of archaeological values will occur as a result of mineral exploration and development. This loss will be focused primarily in the areas of high and moderate mineral potential, comprising 75% of the WSA. Existing Federal laws and BLM guidelines, as listed in the CDCA Plan, will be utilized to reduce any impacts.

6. Impact on BLM Sensitive Plant Species: Loss of habitat, caused by potential mineral development, will occur. Although within this WSA, impacts may be extensive, these species have broad ranges so these impacts will affect an insignificant portion of their total habitat. BLM management guidelines, as outlined in the CDCA Plan will protect these species to some extent through avoidance and rehabilitation stipulations where possible.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the Final CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phases were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Inaccuracies that are known to exist are noted in parentheses.

1. Inventory Phase: The majority of public comments supported the BLM's findings. Some comments mentioned mining operations which will be considered in the study phase.

2. Study Phase: The 21 letters received on this WSA were evenly divided between support and opposition for wilderness designation. Several factors were listed by opponents as being incompatible with wilderness, including present and former rock quarrying operations and the associated roads, debris, and scenic scars. Wilderness proponents claimed that the areas were capable of being rehabilitated and that the Bureau should cooperate with the County of Riverside in cutting off or mitigating these operations.

   Another factor mentioned as interfering with wilderness quality was the proposed microwave relay locator which would connect the Southern California Edison and Arizona Power Service microwave systems to service the proposed Palo Verde power plant. In addition, the Bureau of Reclamation stated a need to leave this land open for rock removal for the purposes of flood control, river regulation and stabilization, and water storage and conservation. An oil company urged that the land be maintained under multiple use management for future oil and gas and geothermal exploration. A railroad wanted to retain access to areas for drainage surveys, flash flood surveys, derailments, and dike maintenance. There were also a couple of requests to leave the area open to four-wheel drive vehicles.

   One wilderness opponent stated that the natural condition of the area was compromised by the proximity of Blythe, by recreation developments on the Colorado River east of the area's boundary, and the substantial mining activities, OHV use and low-level overflights by military aircraft. In contrast, a proponent of wilderness consideration stated that it was beneficial to have this grand, remote area with its outstanding opportunities for primitive recreation and solitude so close to an interstate highway, to agricultural land, and to the Colorado River recreation spots.

   Wilderness proponents rated the area excellent in scenic quality, noting the spectacular cliffs, viewscapes from higher altitudes, and vast spaces and bajadas. The river orientation was felt to be a positive feature, since only two proposed WSAs share this characteristic. One respondent urged that the intaglios in sections 22, 23, 26, 27, 34, and 35 of T. 4 S., R. 23 E., be included within the WSA boundary.

One comment was received in response to the Public Input Workbook (3/25/79). It recommended boundary changes to exclude surface marks which degrade wilderness.

3. Draft Plan Alternatives: There were few comments specific to this WSA in response to the Draft Plan Alternatives. However, this WSA was one of those opposed by the National Outdoor Coalition (NOC), a coalition of mining, rockhounding, and off-highway vehicle organizations. A large number of club members sent in printed coupons supporting a classification of "moderate use" for the Riverside Mountains, and a "limited use" classification for the WSA portion of the Big Maria Mountains. This opinion agreed, in part, with the recommendation of the Use Alternative. Conservation-oriented individuals and organizations approved the Protection Alternative which recommended wilderness designation for this area.

   The California Department of Transportation requested that the boundary of the WSA be changed to exclude an important site for obtaining sand and gravel, about six miles north of Blythe.

4. Proposed Plan: Again, there were few specific comments on this WSA. The Federal Water and Power Resources Service (Boulder, Nevada) wanted adjustments in the boundaries of this WSA to allow study and possible construction of quarry sites. Conservation organizations and groups such as NOC maintained the same positions as for the Draft Plan Alternatives.

   No comments were received from local governments.

Rice Valley

CDCA 322

RICE VALLEY WILDERNESS STUDY AREA (WSA)

(CDCA-322)

1. THE STUDY AREA --- 51,248 acres

The Rice Valley WSA is located in the extreme northeastern corner of Riverside County, in the southern portion of the California Desert Conservation Area (CDCA), approximately 26 miles northwest of Blythe, California. The WSA includes 48,133 acres of public land administered by the Bureau of Land Management (BLM), 93 acres State land and 3,022 private acres (see Map 1 and Table 1).

The western boundary of the WSA follows a jeep trail south to the Santa Fe Railroad, then heads southeast following the ridgeline of the western extension of the Big Maria Mountains. The southern boundary proceeds east along this ridgeline until it intersects a powerline right-of-way. The eastern boundary follows this northeast-southwest trending right-of-way to a maintenance road. Then, following this feature, the boundary proceeds north. The northern boundary follows section lines between the maintenance road and the jeep trail.

The WSA includes most of the broad, flat plains of Rice Valley and the northwestern tip of the steep, rugged Big Maria Mountains. The Rice Valley Dunes, a system of fairly small dunes rising 30' to 40' above the surface, form a long narrow band which runs through the middle of the valley. Rice Valley is the southern terminus of an extensive sand sheet that extends from Cadiz Valley through Ward Valley, and represents a part of one of the largest dune systems in the California Desert Conservation Area. Elevation varies from a low of approximately 700' in the vicinity of the dunes in the northeast portion of the WSA to a high of 2,000' in the Big Maria Mountains in the south.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statement (EIS) for the CDCA Plan: protection, use, balanced, and no action; a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

0	acres recommended for wilderness
48,133	BLM acres recommended for nonwilderness

No wilderness is the recommendation for this WSA. The entire acreage in this WSA is released for uses other than wilderness. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The WSA is recommended nonsuitable because its potential for motorized recreation, and mineral exploration and development outweigh the area's marginal wilderness values. Within this WSA, wilderness values are mediocre. In part, this is due to the activities of man, such as recreation, mineral exploration and development, and military training. However, even without these intrusions, the wilderness values lack distinction and singularity. In those areas untouched by man, the forces of nature have created a bleak landscape, destitute of interesting and unique features.

The natural condition of the area has been marred by primitive routes and ways, tank tracks, unexploded military ordnance, and surface disturbances related to mineral development. During World War II, Rice Valley was used by the U.S. Army for military training. The Rice Air Base, located just outside of the WSA's northern boundary, was used to train pilots in aerial maneuvers. Rice Valley was used for bombing and strafing practice and the area still contains unexploded ordnance hidden beneath the sand. There are approximately seven miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use.

Opportunities for solitude and primitive and unconfined types of recreation are available in the WSA's interior only. This area provides expansive vistas, imparting to the visitor a sense of vastness and desolation. Where one can see for miles, solitude is limited. The flat terrain offers few hiding places. Only in the washes or among the highest dunes can a feeling of seclusion be achieved.

Because there are no man-made constraints, the WSA offers the freedom of unconfined movement. However, primitive recreation opportunities are limited to activities which require only the most basic of skills such as day hiking. The flat terrain precludes many of the more difficult and technical types of primitive recreation such as rock climbing or orienteering. Because of the poor habitat, activities such as hunting, wildlife viewing and bird watching do not occur in this WSA.

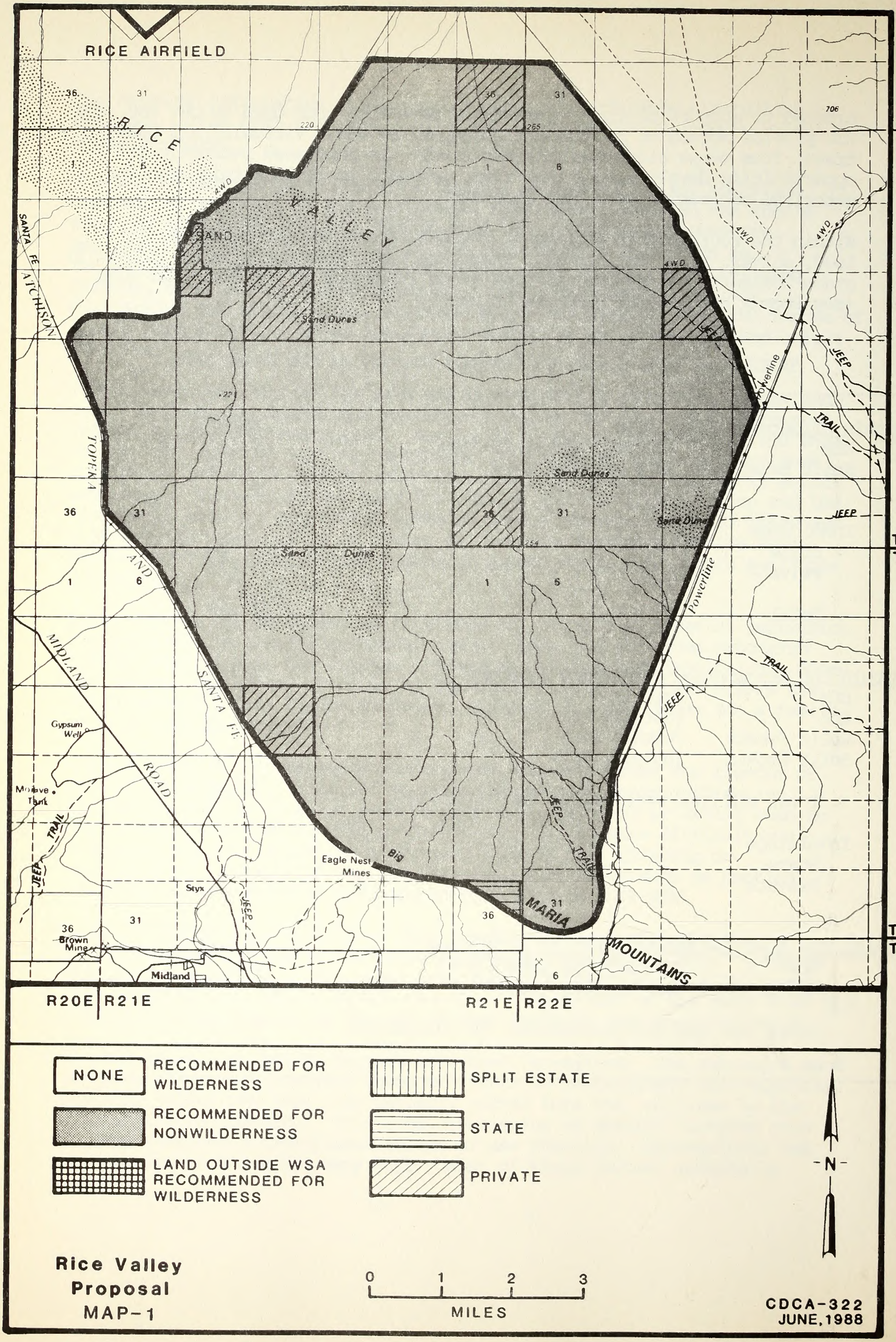
With the exception of the small dune system, the area reflects the topography and vegetation displayed in the surrounding valleys. Although the dunes are unique in the local area they are relatively insignificant when compared with others within the CDCA. Vegetation on the sand sheet and the surrounding bajadas is typical of that found in the Colorado desert.

The WSA is well suited to support motorized recreation. The extensive sand surfaces offer a challenging array of motorized recreational opportunities. The Rice Valley OHV Area lies entirely within this WSA, adjacent to the area's eastern boundary. This area, consisting of several isolated dune fields, receives a significant amount of use annually. Recreational use also occurs on the WSA's many ways. Most of these routes, originally created to support military operations, have been kept open by OHV use, and now provide access to locations throughout the WSA. Virtually all users travel from camps along the Colorado River. As increased recreational opportunities develop along the river, pressure to utilize this area for motorized recreation will also increase.

Within the southwestern portion of the WSA, there is high potential for lead, silver, zinc, and copper. There are also known deposits of industrial grade wollastonite, gypsum and high grade limestone in the southwest area (see Energy and Mineral Resource Values).

TABLE 1 - Land Status and Acreage Summary of the Study Area

		Acres
Within Wilderness Study Area		
BLM	(surface and subsurface)	48,133
Split Estate	(BLM surface only)	0
Inholdings		
State		93
Private		3,022
Total		51,248
Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	0
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		0
Inholdings		
State		0
Private		0
Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	48,133
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		48,133


RICE AIRFIELD
RICE
VALLEY
SAND
Sand Dunes
Sand Dunes
Sand Dunes
Sand Dunes
SANTA FE
ATCHISON
TOPEKA
AND
SANTA FE
MIDLAND
ROAD
4WD
4WD
4WD
4WD
JEEP
JEEP
JEEP
JEEP
JEEP
TRAIL
TRAIL
TRAIL
TRAIL
Powerline
Powerline
Gypsum Well
Mojave Tank
Eagle Nest Mines
Styx
Brown Mine
Midland
Big
MARIA
MOUNTAINS
T1S
T2S
T2S
T3S
T3S
T4S
R20E
R21E
R21E
R22E
NONE
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES

Rice Valley Proposal
MAP-1

CDCA-322
JUNE, 1988

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: Naturalness has been adversely affected by the past uses which have occurred in Rice Valley, primarily related to military training. A U.S. Army Air Base (Rice Air Base, located just north and outside of the WSA) was used for training during World War II. Rice Valley was used for bombing and strafing practice and the northeastern one-third still contains remnant signs warning of the danger of unexploded subsurface ordnance. Current use consists almost exclusively of motorized recreation. A few dirt routes used originally to support military operations have been kept open by OHV use. The majority of this use, however, occurs in the Rice Valley OHV Area, a free-play area. Rice Valley is experiencing an ever increasing amount of off-highway vehicle use originating from the campsites along the Colorado River.

2. Solitude: The opportunities for solitude vary between locations. In the washes, vegetation is tall enough to conceal users from each other but on the bajadas the vegetation is sparse and low, offering little shielding. Activities between the dunes remain isolated but on or around the dunes few opportunities for solitude exist. The flatness of most of the area provides miles of unrestricted views in all directions. Off-highway vehicle sounds are not buffered and carry for great distances, further reducing the sense of seclusion.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: Flat terrain with little diversity preclude difficult and technical types of primitive or unconfined recreation such as rockclimbing or orienteering. Also, opportunities for hunting, birdwatching and wildlife viewing are virtually nonexistent because of a lack of suitable habitat for these creatures. Extreme daytime summer temperatures and a lack of water limit hiking and backpacking opportunities.

4. Special Features: None exist within this WSA.

B. Diversity in the National Wilderness Preservation System

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 48,133 acres of the American Desert/Creosote Bush-bur Sage ecosystem. The Rice Valley WSA would not increase the diversity of the types of ecosystems represented in the NWPS.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas areas	NWPS Areas acres	Other BLM Studies areas	Other BLM Studies acres
	NATIONWIDE			
American Desert/Creosote Bush-bur Sage	3	126,033	48	1,523,932
	CALIFORNIA			
American Desert/Creosote Bush-bur Sage	2	26,427	20	929,471

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of six major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a five-hour drive of the population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas areas	NWPS areas acres	Other BLM Studies areas	Other BLM Studies acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The WSA is within 50 air miles of 18 BLM WSAs recommended for wilderness designation. Joshua Tree Wilderness Areas, administered by Joshua Tree National Monument, 30 miles to the west, are the nearest designated wilderness areas.

C. Manageability

The Rice Valley WSA is manageable as wilderness, but only with extreme difficulty. Frequent signing, detailed maps and intensive patrolling along much of the border would be required to insure the integrity of the unit. The small dunes and surrounding washes located within the WSA are attractive play areas for all types of motorized vehicles. These are the only dunes in the immediate area and as recreational use along the Colorado River and in the Coachella Valley increases the WSA will experience increased use pressure. Constant surveillance would be required to protect the wilderness values.

Management would be further complicated by the fact that the northeastern third of the WSA was previously designated as "contaminated" by the U.S. Army with unexploded ordnance remaining from the training activities during World War II. At present, the degree of danger is unknown. A thorough sweep of the area by explosive ordnance disposal personnel would be necessary to assure safety at the site. Some impairment to the wilderness values might result from this type of cleanup operation.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The suitability recommendation made in 1980 was based on the data contained in the BLM Big Maria Geology-Energy-Minerals (GEM) Resource Area (GRA) files. BLM GEM data in the wilderness portion of the EIS (Volume B, Appendix III) indicated in 1980 that the southwestern part of the WSA had a moderate potential for the occurrence of several types of mineral resources. The Rice Valley WSA is composed of mostly Quaternary (recent) alluvium and dune sand, and Pleistocene nonmarine sediments consisting of blocky rock and clay mixed with sand. Based on the 1980 GRA data, a moderate potential exists for the occurrence of sand and gravel resources in this alluvium. The entire WSA north of the Big Maria Mountains in the alluvial valley area was classified (1979) by the US Geological Survey (USGS) as a Potential Geologic Structure (PGS) for oil and gas (now Prospectively Valuable under BLM classification).

   The extreme southern portion of the WSA (approximately 10%) encompasses the northern limb of the Big Maria Mountains and is composed predominately of Precambrian gneiss (a high grade metamorphic rock) in thrust fault contact with the metamorphic pre-Cretaceous marine rocks consisting mostly of limestone/marble and Paleozoic marine rocks locally grading between marble/wollastonite/gypsum. These latter two formations are locally known for the production of industrial grade gypsum, wollastonite (used in the ceramics industry), and high grade (98% pure) limestone/marble (used in the iron and cement industry and as food additives). The old Bald Eagle Mine lies just outside the southern boundary of the WSA. In the early 1950's, this mine produced 1,576 ounces of silver, 108 pounds of copper, 68,407 pounds of lead, and 1,901 pounds of zinc. The rock formation which this mine worked (pre-Cretaceous metasedimentary rocks) extends into the WSA and was classified in the GRA as having high potential for the occurrence of these minerals. These hills were also classified as having moderate potential for uranium based on gamma-ray survey anomalies.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should Be Considered in the Final Recommendation: No USGS or Bureau of Mines (BOM) mineral surveys were completed because this WSA was recommended nonsuitable for wilderness designation.

   Although classified as a PGS by the USGS and as prospectively valuable by the BLM (1987) based on this PGS classification, there has been no production of oil and gas from the WSA. All oil and gas leases in this area were abandoned in 1985 and 1986. The BLM has maintained a moratorium on leasing within the WSA as directed by the Congress since 1983. Based on these reasons, the WSA is considered as having a low potential for the occurrence of oil and gas resources under the BLM classification system.

   Although the EIS stated that the hills of the southern part of the WSA have a moderate potential for uranium, direct field evidence is available and this moderate potential classification cannot be supported.

   Driftwood rock is a surface weathering texture occurring on rock "sluff" on the hillsides of the Big Maria Mountains. This rock is used as an ornamental stone in landscape applications, and is currently being mined from mining claims in the Big Maria Mountains. Resources are very limited within the WSA, however, under the BLM classification system, the geology, known deposits, and historical interest indicate a high potential for the occurrence of this rock within the southern portion of the WSA. A high potential exists under the BLM classification system for a quartzite called Rosetta Stone which is presently under application for a sale on a hillside in the southern portion of the WSA. The hill and deposit are bisected by the WSA boundary and the sale proposal affects the area outside the WSA.

   Isolation from available markets, poor quality, and a lack of interest indicated by a lack of Free Use Permits or contract sales issued in recent history indicates that this area has a low potential for sand and gravel resources based on the BLM classification system.

The EIS states that this study area has had a "recent" history of mining. Information available from the GRA and recent BLM records indicate that past mining has occurred just outside the WSA but no known mining has occurred within the boundary of the WSA. There is no current mining activity in the WSA and the only interest shown in mineral development is in the hills in the southern portion of the WSA for the known deposits of industrial grade wollastonite, gypsum, or limestone. As of December 15, 1987, there were no unpatented mining claims recorded with the BLM within the WSA.

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Naturalness of the area will suffer significant adverse impacts within the boundaries of the Rice Valley OHV Area, constituting approximately 5%of the WSA, due to the passage of increasing numbers of off-highway vehicles. Vehicle noise will also cause moderate adverse impacts to solitude and reduce the quality of primitive and unconfined types of recreation throughout. Leasable mineral exploration and development will cause minor localized adverse impacts to naturalness in the highly mineralized southwest portion of the WSA.

2. Impact on Motorized Recreation Opportunities: Opportunities for motorized recreation both on designated routes of travel and within the open area (5% of the WSA) will continue to be available. Future trends indicate that use in this WSA will increase gradually.

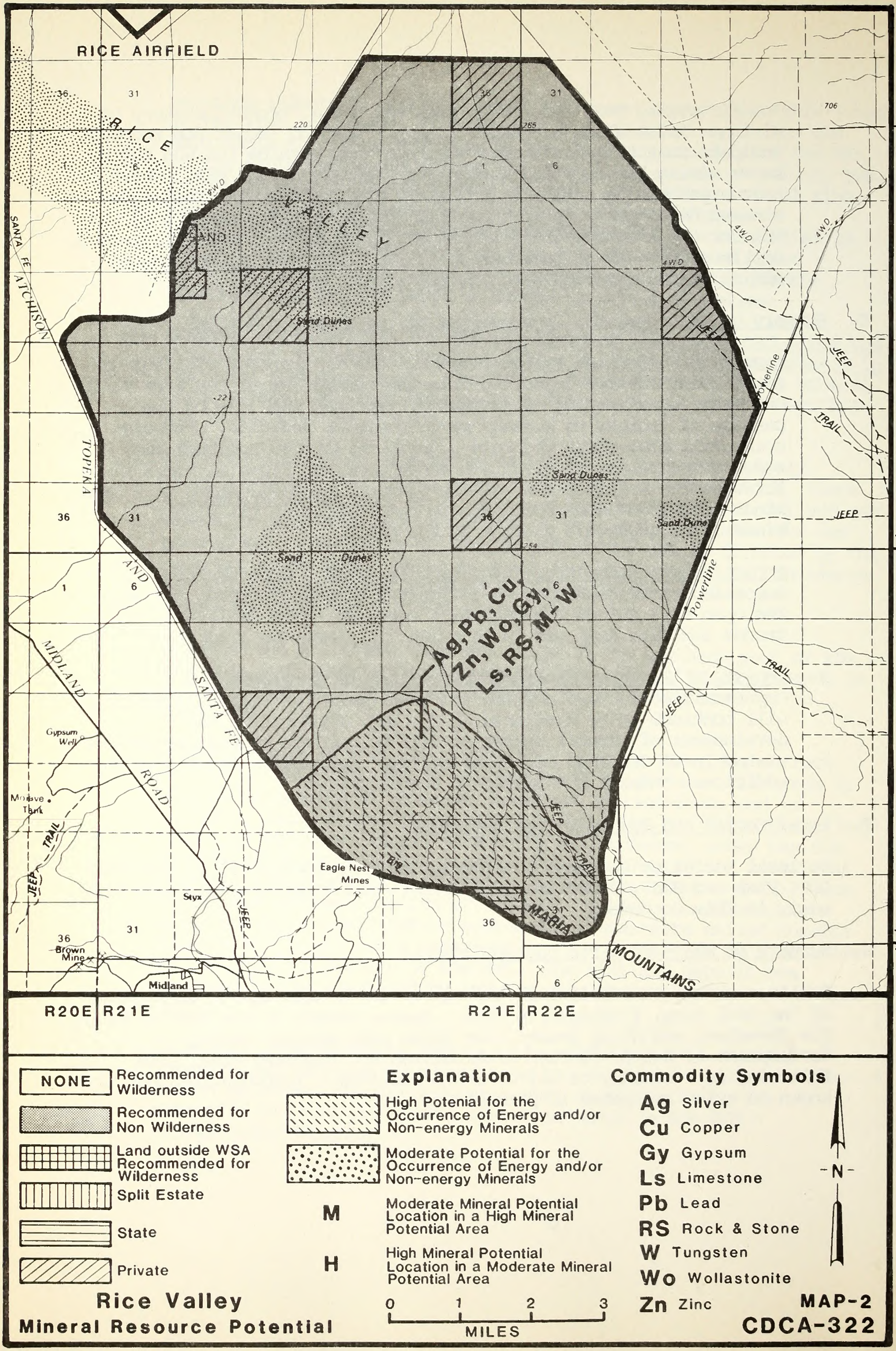
3. Impact on Locatable Mineral Exploration and Development: Opportunities for exploration and development of locatable minerals will continue to be available in the WSA. Exploration and development of mineral resources will be subject to the regulations stated in 43 CFR 3809 regarding surface disturbance as well as any additional constraints listed in the CDCA Plan.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the Final CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phases were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Inaccuracies that are known to exist are noted in parentheses.


RICE AIRFIELD
RICE VALLEY
SAND
Sand Dunes
Sand Dunes
Sand Dunes
Sand Dune
ATCHISON TOPEKA AND SANTA FE
MIDLAND ROAD
Ag,Pb,Cu,
Zn,Wo,Gy,
Ls,RS,M-W
Gypsum Well
Mojave Tank
Eagle Nest Mines
Big Maria Mountains
Styx
Brown Mine
Midland
Powerline
Powerline
JEEP TRAIL
4WD
T1S
T2S
T2S
T3S
T3S
T4S
R20E
R21E
R21E
R22E
NONE
Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M
Moderate Mineral Potential Location in a High Mineral Potential Area
H
High Mineral Potential Location in a Moderate Mineral Potential Area
0
1
2
3
MILES
Commodity Symbols
Ag Silver
Cu Copper
Gy Gypsum
Ls Limestone
Pb Lead
RS Rock & Stone
W Tungsten
Wo Wollastonite
Zn Zinc
N

Rice Valley
Mineral Resource Potential

MAP-2
CDCA-322

1. Inventory Phase: Of the forty-five comments received during the inventory phase, forty-one (91%) favored inclusion of Rice Valley as a Wilderness Study Area. The inventory team had originally determined that the area did not meet the Wilderness Act Section 2 (c) criteria. As a result of the response the area was reevaluated and determined to meet the criteria and identified as a WSA.

   Several letters (e.g. Desert Protective Council and Sierra Club) thought that this type of landform (broad desert valley) was under-represented in the desert-wide inventory. Others voiced concern about protecting the valley and the plant and animal community which is dependent upon sandy terrain. Other values mentioned were "fine examples" of desert pavement, complex mountain outcroppings in the Big Maria Mountains, and the potential for extended back pack trips, day hikes, photography and other recreational activities. Many comments favored expansion of the boundaries to include the West Riverside Mountains, and the entire northwest section, excluding the community of Rice and mining intrusions, so that the entire mountain-valley system could be represented.

   Some factors that detract from the wilderness values that were mentioned were the Federal Aviation Administration transmitter and power transformer, graded roads, railroad tracks, roads, aqueduct and powerlines outside of the area. Some respondents stated that opportunities for solitude were poor because of the flat terrain, and that a better use for the area would be as a motorized vehicle play area for use primarily by residents of Blythe, 26 miles away.

2. Study Phase: Only one Public Response Sheet from the Public Input Workbook of March 15, 1979 was received. It favored wilderness designation for the valley and the restriction of dirt bikes and four-wheel drive vehicles from the area.

3. Draft Plan Alternatives: Few comments specific to the Rice Valley WSA were received in response to the Draft Desert Plan Alternatives. The National Outdoor Coalition (NOC) a coalition of mining, rockhound and off-road vehicle groups provided an alternate proposal and map recommending moderate use guidelines for this general area. A large number of club members submitted letters and coupons supporting NOC's position. Conservation groups, including the Sierra Club and the Wilderness Society supported wilderness designation for the entire WSA. Many public replies reflected this point of view.

4. Proposed Plan: Practically every comment received in response to the Proposed Plan was general in nature. The motorized vehicle groups and the conservation organizations restated their overall positions, which reflected those provided in response to the Draft Plan Alternatives.

   No comments were received from local governments.

Palen/McCoy

CDCA 325

PALEN-McCOY WILDERNESS STUDY AREA (WSA)

(CDCA-325)

1. THE STUDY AREA --- 284,730 acres

The Palen-McCoy WSA is located in eastern Riverside County, in the southeastern portion of the California Desert Conservation Area (CDCA). It lies approximately 15 miles east of Desert Center, and 25 miles west of Blythe. The WSA includes 268,917 acres of public land administered by the Bureau of Land Management (BLM), 8,319 acres of State land and private inholdings totalling 7,494 acres (see Map 1 and Table 1).

From the northeast corner, the WSA's northern boundary follows section lines to a cherrystemmed road, then proceeds southwest across country to the northern edge of the Granite Mountains. To the west, the boundary follows State Highway 177, excluding one cherrystemmed road, then trends southeast avoiding private land. The southern boundary follows a powerline and gasline right-of-way, omitting a third cherrystemmed road. To the east, the boundary follows the topography of the eastern side of the McCoy Mountains, then heads west to the eastern side of the Palen Mountains, avoiding patented mining claims and areas of surface disturbance. Then again swinging east, the boundary follows the ridgeline of the Little Maria Mountains, until finally, it heads north to meet the northern boundary.

Within this WSA are four distinct mountain ranges and the broad, sloping bajadas that separate them. Because this large area incorporates so many major geologic features, the diversity of landforms and vegetation is exceptional.

The Palen-McCoy WSA falls within the category identified as the American Desert Province. Vegetation consists of creosote scrub on the mountain slopes and alluvial plains, and desert microphyll woodland in the large dry washes. Dominant plant species within the creosote bush scrub community are creosote bush, burro bush, brittle brush and cheese bush. Within this community, scattered ocotillo, barrel cactus, pencil cholla, cotton-top cactus and pygmy cedar can also be found. The microphyll woodland community is characterized by ironwood, palo verde and desert lavender.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statement (EIS) for the CDCA Plan: protection, use, balanced, and no action; a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

80,128	acres recommended for wilderness
193,252	BLM acres recommended for nonwilderness

Partial wilderness (28% suitable) is the recommendation for this WSA. The 193,252 acres in this WSA recommended nonsuitable are released for uses other than wilderness. In addition to the Federal acreage recommended for wilderness, BLM recommends that 1,236 acres of private land and 3,227 acres of State land be acquired through exchange or purchase and designated as wilderness. With acquisition of these inholdings, a total of 80,128 acres are recommended for wilderness. Appendix 1 lists all inholdings and provides additional information on their acquisition. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The portion of this WSA endorsed for inclusion in the National Wilderness Preservation System (NWPS) is recommended for the following reasons: (1) the area possesses outstanding wilderness values; (2) a large portion of the area is representative of a landform rarely recommended suitable in other BLM study areas; and (3) the area contains numerous special features. Because of these important factors, preservation of this area as wilderness outweighs any alternative uses of the area.

The area being recommended for designation possesses outstanding wilderness qualities. The rugged southern portion of the Palen Mountains and the enormous valley which separates them from the McCoy Mountains exhibit great potential for diverse types of primitive recreation. Here, opportunities for solitude abound. The Palen Mountains are extremely rugged and local surface variation, in addition to scattered vegetation, ensures a sense of isolation and remoteness. In the washes, heavy vegetation assures solitude. Naturalness in the area has been preserved by the rugged terrain and the remoteness of the area. Because wilderness values are so significant, the suitability recommendation will preclude any further vehicular use of approximately 42 miles of primitive access routes of travel.

This area is somewhat unique among other recommended areas in the CDCA because it includes a large bajada landform. The two major geological features which comprise the WSA's suitable area are the southern portion of the Palen Mountains and the northern extension of the Chuckwalla Valley. This major valley area is one of only a few large, flat bajada-wash type of landforms recommended as suitable within the CDCA. The area provides a true cross-section of what one expects in a typical desert environment. Blow sand, sandy washes tangled with ironwood thickets, large expanses of untouched desert pavement, bajadas, interior valleys and canyons, and rugged crags and peaks intersperse in an ever changing pattern. The continuously changing landforms provide backdrops which support feelings which can range from confinement to absolute freedom.

Within the suitable area exists a variety of special features. They include an extensive undisturbed ironwood wash ecosystem, several sensitive plant and animal species, and significant cultural resources. A more detailed discussion of these special features is given in the Wilderness Characteristics section.

Within the suitable portion of the WSA, few resource conflicts exist. The only one of significance involves exploration and development of mineral resources. Within the suitable portion, 24 mining claims have been filed with BLM. Though none of these claims are currently producing, the CDCA Plan EIS has identified the southwestern Palen Mountains as having known deposits of high-grade iron ore and talc. Two active mining operations have been cherrystemmed out of the WSA. In the decision-making process, it was recognized that conflicts exist between mineral resources and wilderness values, but it was decided that, within the suitable area, the value of the wilderness resource was more significant than the competing mineral resources.

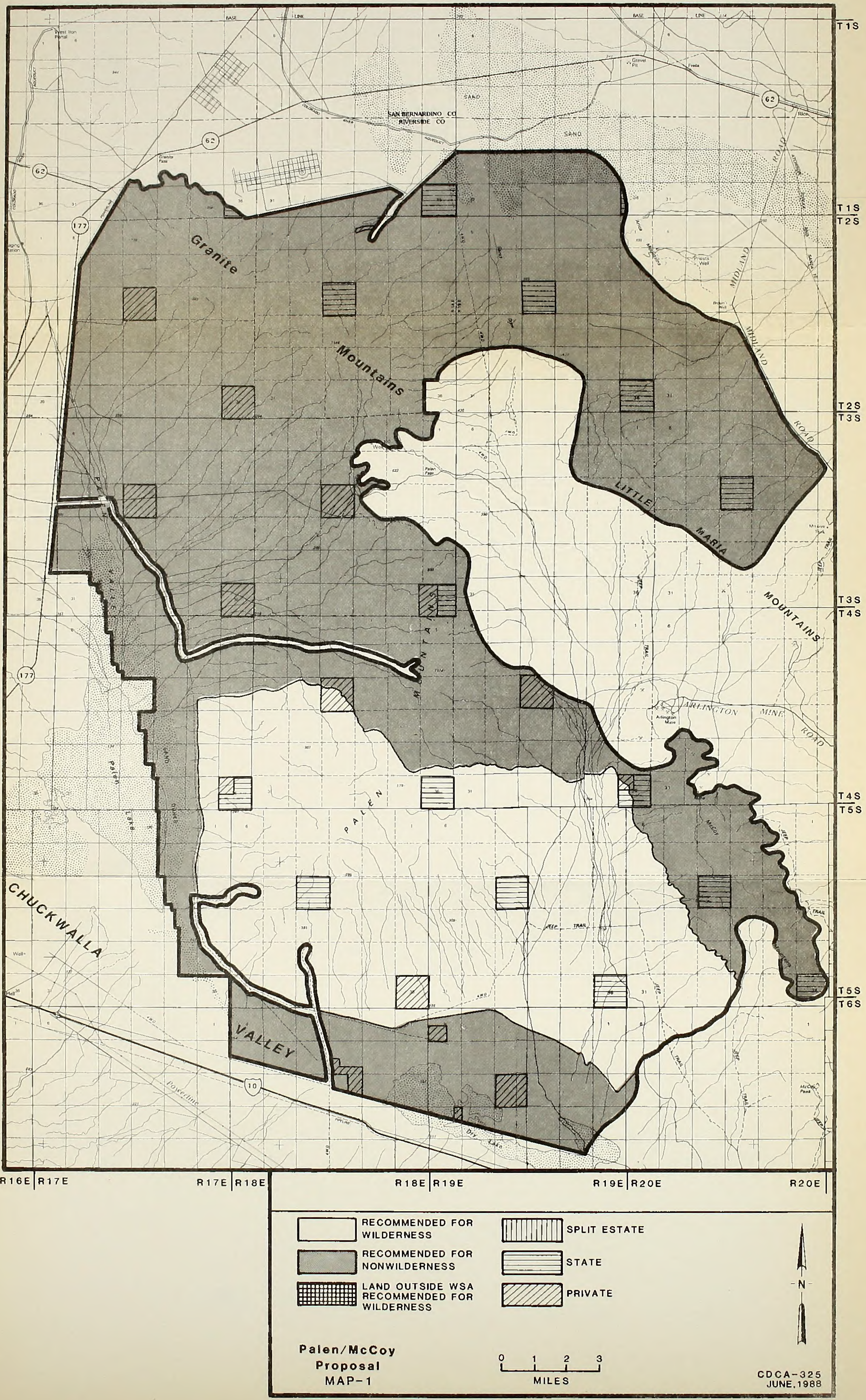
The majority, 193,252 acres, of the Palen-McCoy WSA is recommended as nonsuitable for wilderness designation. In this portion of the WSA, wilderness values are marginal, resource conflicts involving important mineral resources and recreational opportunities are more prevalent, and management as wilderness would be extremely difficult.

Within the nonsuitable area, wilderness values only marginally met the criteria set forth in Section 2(c) of the Wilderness Act of 1964. Here, naturalness is lessened by evidence of historic mining activities, a web-like network of primitive ways, and the remnants of past military activity. Opportunities for both solitude and primitive and unconfined types of recreation are not as readily available here, as in the suitable area.

Throughout this area, development of important mineral resources would be foregone if wilderness designation occurred. There are 356 mining claims scattered throughout the nonsuitable portion of the WSA. Around the turn of the century, two mines in the central Palen Mountains produced undetermined amounts of rich ore containing up to 60% copper, plus silver and gold. The area is now actively explored for copper and silver. Geophysical data,suggests an ore body below the surface. Therefore, this area has high potential for mineral resources. The northern Palen Mountains are mineralized and altered similarly to the copper deposits in the central Palen Mountains. Prior to 1918, the St. John Mine produced an undetermined amount of ore containing up to 40% copper, in addition to silver and gold. Also in this area are at least 12 past producers of manganese. This area has high potential for copper, manganese, gold and silver.

The Palen Pass area contains known resources of gypsum, a vital agricultural material; fluorspar, used in steel making; plus silica and copper. Geochemical data indicate moderate potential for molybdenum, zinc, and lead in southeastern Palen Pass.

Traditional recreational uses of the nonsuitable area have required the use of motorized vehicles for access. Primitive camping, off-highway vehicle touring, hunting, and rockhounding are traditional activities for this area. Wilderness designation of this area would virtually eliminate these activities. Although camping, rock collecting and hunting would still be allowed under wilderness management guidelines, the extreme ruggedness of the Little Maria, Granite, McCoy, and northern Palen Mountains would preclude access to all but the most physically fit, thereby reducing use levels to near zero. This issue was raised many times in public comments. Many people commenting on wilderness recommendations for the area identified the potential loss of these family-oriented activities as reasons for nonsuitable recommendations. There are approximately 100 miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use.



T1S
T1S
T2S
T2S
T3S
T3S
T4S
T4S
T5S
T5S
T6S
R16E
R17E
R17E
R18E
R18E
R19E
R19E
R20E
R20E
BASE LINE
SAN BERNARDINO CO
RIVERSIDE CO
SAND
SAND
62
62
62
177
177
10
Granite Mountains
LITTLE MARIA MOUNTAINS
PALEN MOUNTAINS
PALEN VALLEY
CHUCKWALLA VALLEY
Palen Lake
Dry Lake
MIDLAND ROAD
ARLINGTON MINE ROAD
Arlington Mine
Palen Pass
Priests Well
Brown's Well
Gravel Pit
Freda
Rice
West Iron Portal
Granite Pass
JEEP TRAIL
4WD
TRAIL
Powerline
McCoy
McCoy Peak
Well
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0 1 2 3
MILES

Palen/McCoy
Proposal
MAP-1

CDCA-325
JUNE,1988

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	268,917
Split Estate	(BLM surface only)	0
Inholdings		
State		8,319
Private		7,494
Total		284,730

Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	75,665
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		75,665
Inholdings[1]		
State		3,227
Private		1,236

Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	193,252
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		193,252

---

[1] Appendix 1 is a detailed description of inholdings and split estate tracts included within the study. For purposes of this report, split estate lands are defined only as those lands with Federal surface and non Federal subsurface (minerals). Lands that have Federal minerals but non Federal surface should be classified in this report by the owner of the surface estate.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The natural condition of the recommended suitable area has been substantially unaffected by man. Past activities, limited to mining and light recreation, have not caused an appreciable reduction in naturalness. Topographic variation throughout and vegetative screening in the valleys serve to reduce the impact of any evidence of man. The interior of the Palen Mountains is especially pristine.

   Within the nonsuitable portion, naturalness has suffered greater impacts from the works of man. Here, mining scars and off-highway vehicle trails are common intrusions. This portion of the WSA has also suffered adverse impacts by its past use as a military training area. During World War II, training maneuvers utilizing tank corps and infantry ranged over vast areas. Today, remnants of a training camp, Camp Granite, are visible on the north slope of the Granite Mountains. Surface disturbances include old roads, rock alignments and countless tank tracks.

2. Solitude: Throughout much of the area, opportunities for solitude are abundant. The Palen Mountains are extremely rugged. Within their confines, local surface variation works with scattered vegetation to provide countless hideaways. In the washes of the Chuckwalla Valley, dense vegetation ensures solitude.

   In the interiors of the Granite, Little Maria and McCoy Mountains, located in the nonsuitable area, opportunities for solitude also exist. On the bajada areas in Palen Valley and the sand draw between the Granites and the Little Marias, opportunities for solitude are diminished by a lack of topographic variation and sparse low vegetation.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: The suitable area is large and completely lacking in restrictions of any type. Recreationists would be afforded the opportunity to utilize the area in complete freedom. The diversity of landform and terrain provide for a range of primitive types of recreation. The nonsuitable portion of the WSA which has traditionally been used by motorized recreationist, has similar opportunities for primitive recreationists. However, these activities are somewhat constrained by the area's past uses. For instance, abandoned mines constitute hazards to be avoided by hikers or backpackers.

4. Special Features: Within the area recommended as suitable, many special features exist. The northern portion of the Chuckwalla Valley, included in the suitable area between the Palen and McCoy Mountains, is a large alluvial outwash plain laced with southwesterly running washes which drain the scarce rainfall into Palen Dry Lake. This area represents an outstanding example of ironwood wash. The desert microphyll woodland community typified in this wash system, is the most productive habitat type in the Colorado Desert. The trees found in this woodland provide food, cover and nesting sites for a variety of desert wildlife. Desert burro deer use this wash habitat extensively sharing it with large desert carnivores such as coyote, bobcat, kit and gray fox, and mountain lion who use the dense ironwood thickets for foraging.

   A small herd of approximately 15 desert bighorn sheep is known to use the WSA. One big game guzzler has been constructed on State lands within the WSA to provide permanent water for this small herd of bighorn.

   One BLM sensitive plant species is known to occur within the WSA. Alverson's foxtail cactus (Coryphantha vivipara var. alversonii) is limited in distribution to the eastern Colorado Desert. This plant, endangered by over-collection, is a candidate for Federal listing by the U.S. Fish and Wildlife Service and is on the California Native Plant Society's list of rare and endangered species.

   Within the recommended portion of the study area, lies an area identified as Desert Cahuilla territory which contains a permanent village site, springs of ritual association and burial locations. Two areas of known cultural resource sensitivity/significance are located within the recommended area. One of these areas, located in the southeast portion of the area contains temporary camps, potsherd scatters, trails, lithic scatters, cleared circles and isolated tools. A second area, located near the eastern boundary of the suitable area, is comprised of a temporary camp, trails, rock art and other materials of cultural significance. These archaeological sites were placed on the National Register of Historic Places in May, 1982.

   In the nonsuitable portion, few special features exist. However, on the north slope of the Granite Mountains lies an area of historical interest because of its use during World War II for training. One of General Patton's camps, Camp Granite was located here. Remnants of the camp still remain and signs of tank tracks are still evident.

B. Diversity in the National Wilderness Preservation System

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 135,459 acres of the American Desert/Creosote Bush-Bur Sage and 133,458 acres of the American Desert/Palo Verde-Cactus Shrub ecosystems. The extensive bajada landform, located in the southeastern portion of the WSA, is

one of the few such landforms in the CDCA which has been recommended suitable. The majority of wilderness areas being recommended in the CDCA are mountain ranges. It is essential that landforms representing other features be included in the wilderness system to ensure a proper balance. The combination of the Palen Mountains and the Chuckwalla Valley provides an outstanding example of the variety of landforms and their transition.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas		Other BLM Studies	
	areas	acres	areas	acres
	NATIONWIDE			
American Desert/Creosote Bush-bur Sage	3	126,033	48	1,436,700
American Desert/Palo Verde-Cactus Shrub	2	271,403	42	1,412,382
	CALIFORNIA			
American Desert/Creosote Bush-bur Sage	2	26,427	20	842,239
American Desert/Palo Verde-Cactus Shrub	0	0	11	460,403

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of seven major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a five-hour drive of the population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS areas areas	NWPS areas acres	Other BLM Studies areas	Other BLM Studies acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Oxnard-Ventura	23	2,195,198	85	2,703,260
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The WSA is within 50 air miles of 21 BLM WSAs recommended for wilderness designation. Joshua Tree Wilderness Areas, administered by Joshua Tree National Monument, 15 miles to the west, is the nearest location where designated wilderness can be found.

C. Manageability

The Palen-McCoy WSA is manageable as wilderness. While suitably recommended area is manageable as wilderness, management of the nonsuitable area would be extremely difficult.

Within the suitable area, there are some minor issues which require additional management consideration. All of the western border and approximately half of the southern border of the suitable area are defined by well used dirt roads which can easily be identified on the ground. The northern border follows washes and although not large, they provide suitable means of identification. The northern boundary and the remainder of the southern boundary, for the most part, follow contours and topography and would require detailed maps and frequent signing to ensure their integrity. The ability for users to accurately locate the northern border is critical since the adjoining land will be managed under moderate intensity guidelines. Without adequate identification, inadvertent penetration by off-highway vehicles could result. Confrontations and possible conflicts between users and/or wilderness degradation could result. This would not be a problem along the eastern border where terrain precludes conflicting uses.

There are four privately owned parcels within the suitable portion, all of which are proposed for acquisition. Because of their remoteness, the development potential for these parcels is limited. Their presence should not reduce manageability significantly.

Presently, there is one bighorn sheep guzzler located on State land within the WSA. Once designated wilderness, an administrative determination will be made to provide for maintenance of this guzzler by the California Department of Fish and Game.

There are 24 mining claims within the suitably recommended area along with areas of high and moderate mineral potential. Development of valid claims within wilderness would create manageability problems.

On the other hand, the nonsuitable area would be extremely difficult to manage as wilderness. The contorted eastern boundary, winding around the mountain chains has a length of nearly 80 miles. This entire boundary would require extensive signing and detailed mapping to prevent inadvertent intrusions by motorized vehicles.

there are additional management concerns for this nonsuitable area. Mining operations located immediately outside of the WSA may have detrimental effects on wilderness qualities by producing considerable noise, visual impacts and dust which will intrude several miles into the area's interior. Also, mining operations within the WSA, have the potential for creating management problems. Mining claims with valid existing rights could continue.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Palen/McCoy WSA is located in the BLM Palen/McCoy and western Big Maria Geology-Energy-Mineral (G-E-M) Resource Areas (GRA). The G-E-M section of the wilderness portion of the CDCA Plan EIS (Volume B, Appendix III) stated that the WSA had seven areas identified as having high mineral potential. The 1980 EIS indicated that a portion of the Ford Dry Lake KGRA extended into the southern part of the WSA. In the central Palen Mountains, two mines produced copper, silver, and gold stating that the area should be considered as having an extremely high potential for the strategic minerals silver and copper. In the northern McCoy Mountains, the Saint John Mine produced high grade copper, gold and silver ore prior to 1918. At least twelve mines in the area produced 25,000 short tons of manganese ore (a strategic mineral) by 1960. The central McCoy Mountains were considered in the EIS as

having high mineral potential. The Arica Mountains were noted in the EIS as having a high potential for metals based on three mines which produced 1,174 ounces of gold, 534 ounces of silver, 6,911 pounds of copper, and 920 pounds of lead.

In the Palen Pass area, the EIS recognized high potential for gypsum and fluorite based on known resources and a present producer (1980), with the area classified extending into the WSA. In addition, the EIS recognized 12 areas of medium potential in the WSA for metallic and nonmetallic minerals, geothermal, and uranium energy resources, and common mineral materials (sand and gravel, building stone).

The 1980 GRA files support the EIS statements. The accompanying mineral potential map shows the areas classified for mineral resource occurrence by the G-E-M process identified in the EIS. GRA file data indicated in 1980 that the WSA contained a large area that encompasses four highly mineralized mountain ranges, the Palen, McCoy, Little Maria, and Granite Mountains. Both GRA files state that numerous mines in the central Palen and northern McCoy Mountains have produced manganese (Black Jack, Arlington, St. John mines in the Manganese Canyon Mining District) and copper. These areas were classified in the GRA as having a high occurrence potential for those metals. Past mining activity and geochemical anomalies supported the GRA moderate occurrence potential classification for manganese in the northern and southern Palen, northern McCoy, and southern Granite Mountains.

The Big Maria GRA file showed two areas of moderate potential for the occurrence of limestone in the Arica and northern Little Maria Mountains within northeast portion of the WSA. A small area in the Arica Mountains, in the northeast portion of the WSA, was classified as having a high potential for gold, silver, lead, and copper based on past mining activity in the Arica gold mining district. At the time of the 1980 recommendation, the central Palen Mountains were being explored for copper (Palen Copper mine) and was classified as having a high potential for the occurrence of copper.

In addition, moderate occurrence potential classifications were made in the Granite and southern Palen Mountains for copper based on favorable geology and geochemical data. GRA file data classified the northern portion of the WSA in the Granite Mountains as having a moderate potential for the occurrence of chromium and molybdenum based on geochemical anomalies.

The southwest and south boundary of the WSA was classified by the U.S. Geological Survey (USGS) as a Potential Geothermal Resource Area (PGRA) in 1978. A small portion of the Ford Dry Lake Known Geothermal Resource Area (KGRA), classified in the GRA as having a high potential for the occurrence of geothermal resources also extends into the southern portion of the WSA. In addition, the southern and southwestern boundaries were classified by the USGS as prospectively valuable for sodium and potassium minerals (1978).

These areas classified PV or PGRA were subsequently classified in the GRA files as having a moderate occurrence potential for geothermal, sodium and potassium.

Most of the southern McCoy Mountains were under unpatented mining claim for uranium. The GRA classified a portion of the southern McCoy Mountains as having a high potential for the occurrence of uranium and thorium resources based on over 1,000 tons of uranium ore produced in the area during the 1950's. Areas of moderate occurrence potential for uranium and thorium were classified in the northern McCoy, northern, southern and eastern Palen, and Granite Mountains based on favorable geology and radiometric anomalies. Areas of past production of talc and iron were classified as high occurrence potential in the recommended suitable southern portion of the Palen Mountains.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should Be Considered in the Final Recommendation: The USGS and U.S. Bureau of Mines (BOM) conducted mineral surveys of the suitable portion of the WSA. The data from these surveys were released by USGS and BOM in joint report (Bulletin 1710-A) in 1985. BOM released a report of their activity in 1984 (MLA-17-84). The USGS and BOM Bulletin identified two areas in the suitable portion of the southwestern Palen Mountains as having mineral potential. One area was classified as high potential for the occurrence of iron which supported the 1980 EIS and BLM GRA classification. The other area was classified as having a moderate potential for pyrophyllite, a soft aluminum silicate with several industrial mineral uses and is incorporated on the accompanying mineral potential map.

   Portions of the alluvial areas of the WSA were classified as prospectively valuable for oil and gas by the BLM in 1982. Under the BLM classification system, the area is considered as having a low potential for the occurrence of oil and gas resources.

   Unpatented mining claims appear to be located in the central and western portion of the recommended unsuitable portion of the WSA, and in the southwestern portion of the recommended suitable portion of the WSA. Unpatented mining claims located in the WSA are summarized in the following table taken from BLM records dated December 1987.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	24	124	148	480	2,480	2,960
Placer	0	232	232	0	9,280	9,280
Mill Site	0	0	0	0	0	0
Total	24	356	380	480	11,760	12,240

E. Summary of Environmental Consequences of the Proposed Action

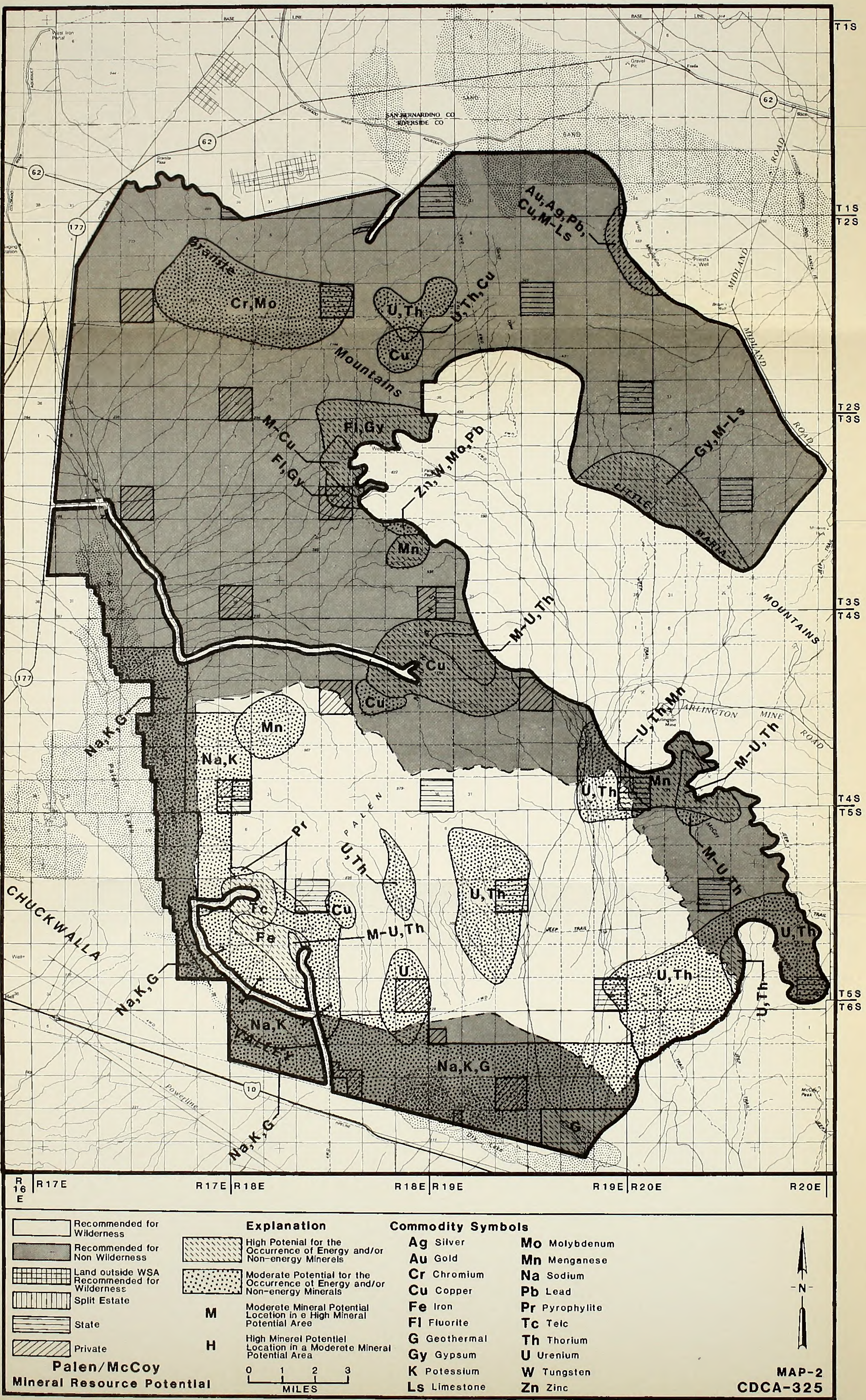
1. Impact on Wilderness Values: In the suitable portion of the WSA, overall wilderness values will be maintained. However, severe site-specific adverse impacts to wilderness values will occur if any valid mining claims are developed. In the nonsuitable areas, mineral development will cause localized impacts to naturalness. These impacts will occur in the mineralized portion of the WSA, covering roughly 25% of the WSA. Opportunities for solitude and primitive and unconfined types of recreation will be adversely impacted along designated routes of travel by the continued use of off-highway vehicles. Approximately 70 miles of routes will remain open.

2. Impact on Locatable Mineral Exploration and Development: The proposed action will cause significant adverse impacts to this activity in the suitable portion of the WSA. In the nonsuitable area, exploration and development of mineral resources will be allowed to continue, subject to the regulations stated in 43 CFR 3809 regarding surface disturbance, as well as any additional constraints stated in the CDCA Plan.

3. Impact on Access and Motorized Recreation Opportunities: In the suitable portion of the WSA, motorized access will be eliminated. In the remainder of the area, motorized vehicles will continue to be allowed on designated routes of travel. Approximately 70 miles of routes located within the boundaries of this WSA will remain open.

4. Impact on Desert Bighorn Sheep habitat: Desert bighorn sheep habitat will generally be protected from surface disturbing activities under wilderness designation. However, location of additional water developments to expand the herd will be constrained by restrictions on motorized access. Maintenance of the existing guzzler will be provided for thorugh administrative designation.

5. Impact on Alverson's Foxtail Cactus/Habitat: In the suitable area, this species habitat will be maintained in its present condition. Because this species grows on rocky slopes within the area, terrain will protect the majority of the habitat in the nonsuitable area. Only slight localized adverse impacts, caused by mineral exploration and development, will affect cactus habitat.


T1S
T1S
T2S
T2S
T3S
T3S
T4S
T4S
T5S
T5S
T6S
BASE LINE
SAN BERNARDINO CO
RIVERSIDE CO
62
177
10
Granite
Cr,Mo
U,Th
U,Th,Cu
Cu
Mountains
Au,Ag,Pb,Cu,M-Ls
MIDLAND ROAD
Gy,M-Ls
LITTLE MARIA MOUNTAINS
M-Cu
Fl,Gy
Fl,Gy
Zn,W,Mo,Pb
Mn
M-U,Th
Cu
Cu
Mn
Na,K
Na,K,G
ARLINGTON MINE ROAD
U,Th,Mn
M-U,Th
U,Th
Mn
M-U,Th
PALEN
Pr
U,Th
U,Th
Tc
Cu
Fe
M-U,Th
U
U,Th
U,Th
U,Th
CHUCKWALLA
Na,K,G
Na,K
VALLEY
Na,K,G
Na,K,G
G
Powerline
R16E
R17E
R17E
R18E
R18E
R19E
R19E
R20E
R20E
Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potential for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
0 1 2 3 MILES
Commodity Symbols
Ag Silver
Au Gold
Cr Chromium
Cu Copper
Fe Iron
Fl Fluorite
G Geothermal
Gy Gypsum
K Potassium
Ls Limestone
Mo Molybdenum
Mn Manganese
Na Sodium
Pb Lead
Pr Pyrophylite
Tc Talc
Th Thorium
U Uranium
W Tungsten
Zn Zinc
N

Palen/McCoy
Mineral Resource Potential

MAP-2
CDCA-325

6. Impact on Cultural Resources: Those sites located within the suitable area will enjoy increased protection under the proposed action. Designation of the area will result in slight adverse impacts because study of these sites will be hampered by the restrictions placed on the use of mechanized equipment. In the nonsuitable area, some loss of archaeological values will occur as a result of mineral exploration and development. This loss will be localized, primarily concentrated in the areas of high and moderate mineral potential, comprising roughly 25% of the WSA. Existing Federal laws and BLM guidelines, as listed in the CDCA Plan, will lessen the rate of this loss by requiring mitigation of any impacts.

7. Impact on Camp Granite: The proposed action will have no impact on Camp Granite. The management actions and protection measures called for in the Desert Training Center, California-Arizona Maneuver Area Interpretive Plan will continue to be implemented.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the Final CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phases were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received.

1. Inventory Phase: Most comments agreed with the findings. A large number urged the inclusion of the area north of the Little Maria Mountains and east of the Granite Mountains in the potential study area. This area has since been included. Other comments dealt with roads and mining activities which were excluded from the study area after further field checking.

2. Study Phase: One hundred thirteen comments were received addressing this WSA. The majority (63) of these favored wilderness designation for the WSA, while 24 wanted to continue multiple use of the area. The rest of the comments addressed specific features which they felt detract from wilderness quality and should not be included in the recommended area. Examples of these features were roads, mines, mining scars and military tank tracks.

   Proponents of wilderness study designation frequently mentioned the geological diversity of the WSA's four distinct mountain ranges and the opportunities for solitude and protection of natural values afforded by its large size. Thirty of those who responded requested expansion of the recommended area by adding the Arica Mountains, the Little Maria Mountains and the valley in between. They stated that the evidence of General Patton's World War II training maneuvers were starting to fade from this area. While these tank tracks were held by many to be incompatible with wilderness, others argued the tracks were only a small part of the valley's desert pavement and that they could soon be qualified as historical features.

Features in the area recommended for wilderness which proponents listed as worthy of protection included the largest ironwood forest in the desert; the scenic value to the Big Maria Mountains; archaeological values at McCoy Springs; exotic rock formations; scenic values of the combination of mountains, sand formations and broad valleys; the presence of such plants and wildlife as bighorn sheep, fringe-toed lizards, raptors, desert holly, the Palen Valley lily; the large bird population of Palen Valley; the presence of the largest pristine wash system in the desert; and outstanding opportunities for photography, hiking, and other related recreation.

Several respondents mentioned sights and sounds which they felt intrude into the area and require boundary adjustments. These include: a railroad; a pipeline; general aircraft, particularly those from Desert Center Airport; visibility of the lights of Blythe at night; State Route 62 and Interstate 10. The extent and impact of private land holdings were felt to negate wilderness suitability of the area. The intrusive impacts of General Patton's activities were noted. Two stone dwellings within the area were mentioned.

The existence of and need for several access routes in the area were mentioned including: roads developed for fire control; motorized vehicle roads on the west face of the McCoy Mountains to be used for hunting, mining exploration, and recreation; vehicle access for a loop through the war games area; access to "Tom's Cabin", Packard Well; and Palen Pass Road for ranchers, recreationists and miners.

Some valley areas had value as future enduro event sites. The dunes provide opportunities for dune-buggy recreation, which is important to Desert Center's economy. Travel in washes provides access to the area with little environmental impact, and education about impacts is preferable to closure of the area to vehicles.

Rockhounders value the area for crystals, halite, calcite, selenite, and other minerals which might be destroyed or buried because of the effects of weather. Copper, gemstones, azurite, malachite and chrysocolla also attract the many visitors who are retired and winter in Blythe; they might be adversely affected economically by a restriction of vehicle access. The area is dry and too large for hiking any distance. Wiley Well Road, the northern part of the McCoy Mountains, and the Palen Mountains are important to these users.

Mineral potential was another reason for requesting a nonwilderness designation. This includes deposits and potential deposits of uranium in the McCoy Mountains, iron veins in sections 19 and 20, T. 5 S., R. 18 E., pyrophyllite in section 18, T. 5 S., R. 5 E., and copper, gypsum and manganese, generally. Potential for oil, gas, and geothermal resources exists within the WSA.

Several comments were received in response to the Public Input Workbook (3/15/79). A few favored wilderness designation because of archaeological values, bighorn sheep habitat, and wildlife variety. Other respondents recommended maintaining existing use as a motorized vehicle area. One comment noted the need for further study of the area and suggested considering family recreation.

3. Draft Plan Alternatives: A variety of public comments specific to this WSA was received in response to the Draft Desert Plan Alternatives. Several agreed with the Protection Alternative. Others agreed with the Balanced Alternative. One agreed with the Use Alternative. Several respondents wanted more wilderness and suggested adding the Desert Holly (Desert Lily) sanctuary. Many respondents disagreed with the Balanced Alternative and recommended adding more nonmountainous wilderness and Chuckwalla Valley to this WSA. General comments included the recommendation to retain existing vehicle access routes for motorized vehicles and rockhounding. It was also suggested that the exploration for and development of oil, gas and geothermal resources under the No Action Alternative are the best uses of this WSA.

   The National Outdoor Coalition (NOC), a coalition of mining, rockhounding and ORV groups agreed with none of the alternatives but recommended wilderness designation for a small portion of the Palen Mountains, limited use for parts of the Little Maria and McCoy Mountains, and medium use for the remainder of the WSA. This position was supported by hundreds of club members who sent in coupons or letters. Conservation oriented individuals and clubs took a variety of positions, all wanting expansion of the area recommended as wilderness in the Balanced Alternative.

4. Proposed Plan: Persons responding to the Proposed Plan/Final EIS mentioned many of the issues described above. Rockhounds were still eager to assure access to their favorite collection sites. The City of Blythe wanted a road from the Wiley Well off-ramp from Interstate 10 to the north end of the McCoy Mountains. The City also wanted an access road to the WSA following the Midland road via the Inca rail siding to the north end of the McCoy Mountains and northwest through the Palen Pass and ending at the Desert Center-Rice Highway. A large number of respondents requested that Ford Dry Lake be designated an ACEC, since its portion of the WSA was being recommended as nonsuitable.

APPENDIX 1
ESTIMATED COSTS OF ACQUISITION OF NON-FEDERAL HOLDINGS WITHIN AREAS RECOMMENDED FOR DESIGNATION
PALEN/McCOY WSA (CDCA-325)

PARCEL No.	LEGAL DESCRIPTION TWNSHP	RNG	SEC	MERIDIAN	TOTAL ACREAGE	NUMBER OF OWNERS	TYPE OF OWNERSHIP BY ESTATE SURFACE ESTATE	SUBSURFACE ESTATE	PRESENTLY PROPOSED FOR ACQUISITION	PREFERRED METHOD OF ACQUISITION	ESTIMATED COST OF ACQUISITION LAND COSTS ($1000)	PROCESSING COSTS ($1000)
1	4S.	18E.	16	SBM	320	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
2	4S.	18E.	36	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
3	4S.	17E.	36	SBM	480	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
4	4S.	17E.	36	SBM	160	1	PRIVATE	PRIVATE	YES	PURCHASE	3.2	2.5
5	5S.	18E.	16	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
6	5S.	18E.	36	SBM	640	4	PRIVATE	PRIVATE	YES	PURCHASE	128.0	2.5
7	4S.	19E.	36	SBM	200	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
8	4S.	19E.	36	SBM	130	1	PRIVATE	PRIVATE	YES	PURCHASE	26.0	2.5
9	5S.	19E.	16	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
10	5S.	19E.	36	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0

These figures were derived from Bureau Land Records and provide for more detail than GIS estimates and therefore may differ from acreage summaries in Table 1.

Coxcomb Mountains

CDCA 328

COXCOMB MOUNTAINS WILDERNESS STUDY AREA (WSA)

(CDCA-328)

1. THE STUDY AREA --- 75,008 acres

The Coxcomb Mountains WSA spans the boundary between San Bernardino and Riverside Counties in the southern portion of the California Desert Conservation Area (CDCA). The closest community is Twentynine Palms, located 30 miles west. The WSA includes 70,993 acres of BLM land, 2,286 acres of State lands and private inholdings totalling 1,729 acres (see Map 1 and Table 1).

This WSA wraps around the northeast corner of Joshua Tree National Monument (JTNM) encompassing portions of the Pinto and Coxcomb Mountains. From the WSA's northwest tip, the northern boundary follows the base of the Pinto Mountains to Clark's Pass. From this point, the boundary proceeds along Highway 62, Twentynine Palms Highway, until it intersects with the Colorado River Aqueduct. The eastern boundary follows the aqueduct, then trends southeast to avoid water diversion dikes. The eastern boundary then follows a transmission line right-of-way road to the base of the Coxcomb Mountains. The boundary skirts around the southern tip of the Coxcomb Mountains and then proceeds along the edge of five diversion dikes until it reaches the JTNM boundary. Most of the WSA's western boundary is shared with the JTNM's northeastern boundary. In the extreme northwestern portion of the WSA, the boundary departs from JTNM and follows the base of the Pinto Mountains to the WSA's northwest tip.

Included within the borders of the study area is terrain that is as diverse and complex as any found within the California Desert. The major landforms within this WSA are the Coxcomb and Pinto Mountains and the transition area between them. Vegetation is typical of the surrounding areas and representative of that found in both the Mojave and Colorado Deserts. Transition areas, where the deserts overlap, display a mixture of vegetative types. Creosote is dominant throughout the area except in and near the washes where smoke trees, desert willow and palo verde are more noticeable. From a distance the mountain sides appear barren, but they actually support a large variety of shrubs and cacti. Desert bighorn sheep and burro deer inhabit the area.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EIS) for the CDCA Plan: protection, use, balanced and no action alternatives and a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

56,154	acres recommended for wilderness
18,211	BLM acres recommended for nonwilderness

Partial wilderness (75% suitable) is the recommendation for this WSA. The remaining 18,211 acres in this WSA are released for uses other than wilderness. In addition to the Federal acreage recommended for wilderness, BLM recommends that 2,286 acres of State land, 937 acres of private land and 149 acres of split estate be acquired through exchange or purchase and designated as wilderness. With acquisition of these inholdings, a total of 56,154 acres are recommended for wilderness. Appendix 1 lists all inholdings and provides additional information on their acquisition. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the Desert Plan and further explained in the California Wilderness Overview.

The portion of the Coxcomb Mountains WSA recommended suitable for inclusion in the NWPS possesses wilderness qualities which, in every measure, far exceed the criteria outlined in the Wilderness Act of 1964. In addition to outstanding wilderness qualities, the existence of few conflicting resources within the WSA and the area's common boundary with existing designated wilderness also contribute to the suitable recommendation.

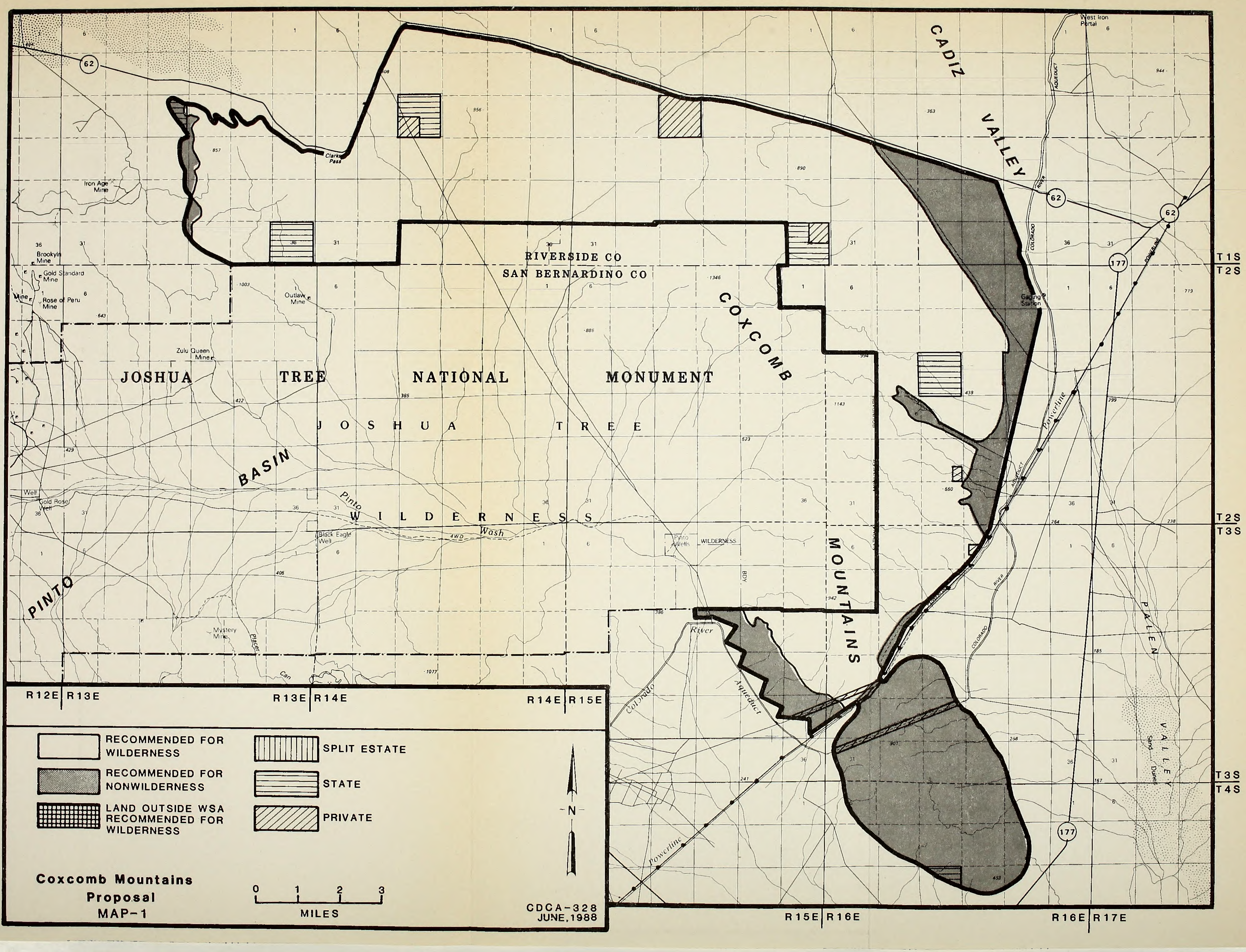
Within the suitable area, the wilderness values of naturalness, and opportunities for solitude and primitive and unconfined types of recreation are outstanding. The rugged Coxcomb Mountains have been affected solely by the forces of nature. Here, the rugged terrain has acted as a barrier to entry, precluding access to all but the most determined. The gentler Pinto Mountains and the adjacent washes and bajadas have received insignificant impacts to naturalness over the years. Terrain and vegetation assure solitude throughout. Views into the JTNM are available from most peaks, and the vastness and sense of isolation are overwhelming. On the rock-strewn slopes and the dissected bajadas, vegetation and landform provide abundant secluded areas. Primitive and unconfined types of recreation are available throughout. The jumbled granite rock piles provide uncommon opportunities for scrambling and free climbing. Opportunities for backpacking, day hiking, photography and nature study are also available here. The suitability recommendation will preclude any further vehicular use of approximately 25 miles of primitive access routes of travel.

Resource conflicts within the suitable portion are limited to mineral resource development and extraction. As of December, 1987, 75 mining claims have been located in the suitable area. Areas of high potential for the occurrence of barite and gold, and areas of moderate potential for the occurrence of gold, silver, copper, lead, tungsten, and molybdenum are located in the suitable area.

The remaining 18,211 acres of the Coxcomb Mountains WSA are not recommended for designation as wilderness because the potential for mineral exploration and development outweighs the area's less than outstanding wilderness values. In the southern extension of the Coxcomb Mountains, 14 unpatented mining claims have been located. Studies by the U.S. Geological Survey and the U.S. Bureau of Mines have indicated that the area has moderate potential for the occurrence of vein gold, silver, copper and iron. Because of the large number of claims, development of these mineral resources is highly probable.

Manageability problems are greater in the nonsuitable area. A powerline right-of-way, in place during the inventory, bisects the southern Coxcombs from the rest of the WSA. Likewise, the Colorado River Aqueduct tunnels across the center of the nonsuitable area. These prior existing rights-of-way will not be abrogated by wilderness legislation, and thus, will diminish wilderness values, affecting BLM's ability to manage the area as wilderness.

On the eastern bajada, also recommended nonsuitable, wilderness values barely met the Section 2(c) criteria for wilderness as outlined in the 1964 Wilderness Act. Naturalness in this flat area has been impacted by off-highway vehicles ranging from dirt bikes to military tanks. Although opportunities for solitude and primitive and unconfined types of recreation exist, they are not memorable. There are approximately ten miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use.


CADIZ VALLEY
West Iron Portal
AQUEDUCT
62
177
Clarks Pass
Iron Age Mine
Brookyln Mine
Gold Standard Mine
Rose of Peru Mine
Outlaw Mine
Zulu Queen Mine
Mystery Mine
RIVERSIDE CO
SAN BERNARDINO CO
JOSHUA TREE NATIONAL MONUMENT
JOSHUA TREE
PINTO BASIN
WILDERNESS
Pinto Wash
4WD
Well
Gold Rose Well
Black Eagle Well
Pinto Wells
WILDERNESS
BDY
COXCOMB MOUNTAINS
Gaging Station
COLORADO RIVER
Colorado River Aqueduct
Powerline
PALEN VALLEY
Sand Dunes
Placer Can
T1S
T2S
T3S
T4S
R12E R13E
R13E R14E
R14E R15E
R15E R16E
R16E R17E
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0 1 2 3
MILES

Coxcomb Mountains Proposal
MAP-1

CDCA-328
JUNE, 1988

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	70,993
Split Estate	(BLM surface only)	0
Inholdings		
State		2,286
Private		1,729
Total		75,008

Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	52,782
BLM	(outside WSA)	0
Split Estate	(within WSA)[1]	0
Split Estate	(outside WSA)[1]	0
Total BLM Land Recommended for Wilderness		52,782
Inholdings[1]		
State		2,286
Private		1,086

Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	18,211
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		18,211

---

[1] Appendix 1 is a detailed description of inholdings and split estate tracts included within the study. For purposes of this report, split estate lands are defined only as those lands with Federal surface and non Federal subsurface (minerals). Lands that have Federal minerals but non Federal surface should be classified in this report by the owner of the surface estate.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The forces of nature that created this WSA continue to be the suitable area's primary influence. Throughout most of the area, the landscape exhibits a primitive character. Rugged terrain insulates much of the suitable area from the effects of man-made features such as highways, mining activities and facilities associated with the Colorado River Aqueduct. In the nonsuitable portion of the WSA, man's influence is more apparent. A powerline, existing at the time of inventory, forms the suitable/nonsuitable boundary. Throughout the southern portion of the area, the scars of past mining activities has a detrimental effect on naturalness. Off-highway vehicle tracks can be found on the flat, eastern bajadas, also recommended nonsuitable.

2. Solitude: Opportunities for solitude vary due to the diversity of the landforms and variation in vegetative patterns resulting from the differences found in the Mojave and Colorado Deserts. The relatively flat bajada and shallow washes along the nonsuitable eastern edge support primarily low growing shrubs which provide little physical shielding. In the larger sandy washes in the north, vegetation is taller and generally more dense. Here, tall creosote and smoke trees in addition to other types of vegetation help provide a feeling of seclusion and isolation. Within the jumbled rocky mountains and outcrops, the opportunities abound. The texture of the surface is such that even at relatively close range the sense of solitude and seclusion would prevail. Views into Joshua Tree National Monument are available from most peaks, and the vastness and sense of isolation is overwhelming. Overall, the area offers outstanding opportunities for solitude.

   This WSA is periodically overflown by military aircraft as part of the national defense mission during approved military operations. The visual intrusions and associated noise create temporary effects on solitude which are deemed acceptable and necessary as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: The ruggedness of the mountains lends itself to primitive recreation by virtually barring the use of vehicles. The area is pristine, and evidence of past use is limited. There is no feeling of confinement and the entire area supports outstanding opportunities for primitive and unconfined types of recreation.

4. Special Features: Wildlife in the Coxcomb and Pinto mountains reflects that found in and around Joshua Tree National Monument. Desert bighorn sheep and burro deer inhabit the area and approximately four square miles of desert tortoise habitat are located within the boundaries. The tortoise is under status review by the U.S. Fish and Wildlife Service for possible listing as a threatened or endangered species. The southwestern portion of the

WSA supports at least one prairie falcon eyrie. Two "drinkers" have been developed in the area to supplement other water sources during the arid summer months.

Outstanding scenic quality is a special feature of this WSA. Here, the elements of color, line, form, and texture create unrivaled natural masterpieces. The crest of the Coxcomb Mountains is composed of a series of irregularly spaced, sharp peaks which provide a dramatic silhouette against the lighter sky. The rock-covered slopes along the face of the range are scarred by deeply eroded canyons and shallow washes which drop and cut the bajada into intricate patterns. Random rock outcrops, reflecting miniaturized versions of the surrounding mountains, rise abruptly from the bajada like islands rising from a sea of sand. Layered landforms combine to create what appears from a distance to be a dark impenetrable surface. A closer look provides glimpses of gentle washes, interior valleys and a maze of canyons which unlock the solid mass and provide access to the interior. Although varying only slightly more than 2,000 feet in elevation between the highest and lowest points, the irregular shape, coarseness and dark color, rising rapidly from a smooth desert floor, supports the impression of a much greater variation.

B. Diversity in the National Wilderness Preservation System

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 36,256 acres of the American Desert/Creosote Bush and 34,737 acres of the American Desert/Creosote Bush-bur Sage ecosystems. Located in the transition zone between the Mojave and Colorado Deserts, this study area is a natural extension of the diverse landforms found in Joshua Tree National Monument. Washes, canyons, alluvial fans, bajadas, pediments, desert varnish, and blow-sand all interact with the wide variety of vegetative patterns to form an ever-changing mosaic with infinite variations. Although other desert areas possess some of these characteristics, few possess them all in such abundance.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas		Other BLM Studies	
	areas	acres	areas	acres
	NATIONWIDE			
American Desert/Creosote Bush	1	343,753	117	4,231,655
American Desert/Creosote Bush-bur Sage	3	126,033	48	1,537,311
	CALIFORNIA			
American Desert/Creosote Bush	1	343,753	88	3,617,851
American Desert/Creosote Bush-bur Sage	2	26,427	20	942,850

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five hour drive of eight major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a five hour drive of the population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas		Other BLM Studies	
	areas	acres	areas	acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Bakersfield	32	4,071,358	128	3,998,548
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Oxnard-Ventura	23	2,195,198	85	2,703,260
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The WSA is within 50 air miles of 12 BLM WSAs recommended for wilderness

designation. The closest designated wilderness areas are located in Joshua Tree National Monument, managed by the National Park Service, adjacent to the WSA's western boundary.

C. Manageability

The Coxcomb Mountains WSA is manageable as wilderness. In the suitable area, there are no significant issues which will preclude the effective and efficient management of the area as wilderness. However, management of the nonsuitable area to maintain wilderness values will be complicated by a number of issues.

In the suitable area, over half the boundary joins designated wilderness. Management along the common boundary will be done in conjunction with the National Park Service. Identical uses on each side will preclude conflicts. Most of the remaining boundary is easily identifiable on the ground. Signing and development and distribution of maps are all that is required to ensure the integrity of the remaining boundary. Development of any of the private inholdings or mining claims is not anticipated because of the difficult terrain. However, acquisition of these inholdings is recommended to facilitate management.

Once designated wilderness, an administrative determination will be made to provide for maintenance of the two existing wildlife water developments.

In the nonsuitable area, manageability is affected by numerous prior existing rights. In the nonsuitable area, two pre-FLPMA rights-of-way cut across the width of the study area. These rights-of-way will require routine maintenance which will affect naturalness. In addition to these rights-of-way, 14 mining claims have been located in the southern Coxcomb Mountains. Although validity examinations will negate many of these claims, those that prove valid have the potential to severely affect BLM's ability to maintain the integrity of wilderness values.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Coxcomb WSA is located in the BLM Eagle Mountain Geology-Energy-Mineral (G-E-M) Resource Area (GRA). The 1980 G-E-M data in the wilderness portion of the CDCA Plan EIS (Volume B, Appendix III) stated that mineral resource data had not been fully analyzed, integrated, and interpreted. However, a "possible" potential for metals occurring in the WSA was stated in the EIS. Public comments on the draft EIS indicated that the WSA was a good rockhounding area.

GRA data indicate that 14 geochemical samples had been taken in and just outside the WSA. The GRA concluded that all areas of the WSA were classified intermediate or unknown. The Moser gold mine was the only mining site documented by the GRA within the WSA. No mention of production from this mine was mentioned in the GRA.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should Be Considered in the Final Recommendation: During the period from 1981 to 1983 the U.S. Geologic Survey (USGS) and U.S. Bureau of Mines (BOM) conducted mineral surveys of the recommended suitable portion of the Coxcomb Mountains WSA. The BOM released the results of their investigation of the mines and mineral properties of the area through Mineral Land Assessment MLA-94-82. The USGS released, in 1983, Open File Report OFR-83-12 which evaluated the analysis of the 216 geochemical samples. The joint report USGS and BOM was published in 1983 as miscellaneous field study map MF-1601-A and accompanying report. MF-1601-A reiterated the conclusions of the BOM report MLA-94-82. The accompanying map shows areas within the WSA having a high or moderate potential for the occurrence of a mineral resource using the BLM mineral classification system. These potential ratings are higher than USGS report, OFR-83-12, because the USGS used a classification system based on economic (development) potential and BLM uses a classification based on occurrence potential. Some areas mapped by the BLM (1980 GRA) are not shown on the USGS map, because, even though they were noted in the text, they were not considered to have economic potential in the foreseeable future. Generally, the mineralized zones in this WSA occur in northwest trending fault zones predominately as fault gouge and hydrothermal quartz veins. In the northwestern portion of the WSA is an area with high potential for the occurrence of hydrothermal vein barite, used in heavy drilling fluids, and moderate potential for the occurrence of vein gold, silver, and copper in granitic rocks. This area may be a southeastward extension of the Dale gold mining district two to three miles west of the WSA.

   A second area in the northwest has moderate potential for the occurrence of vein gold, silver, and copper. In the eastern portion of the WSA is the high potential area around the Moser Mine which is estimated to have 150,000 tons of subeconomic ore reserves averaging 1.7 parts per million (ppm) gold. Fault gouge had results as high as 100 ppm gold and 50 ppm silver.

   Just south of the Moser Mine there is an area of moderate potential for vein lead, tungsten, and molybdenum. Farther south in the extreme southern Coxcomb Mountains is an area of moderate potential for vein gold, silver, copper, and iron. This later area is also considered as having a moderate potential for the occurrence of iron because the geologic environment, consisting of granitic-metasediments in faulted contact, is the same as that found eight miles to the west at the Eagle Mountain Mine site. The Eagle Mountain

Mine produced over 100,000,000 tons of iron (1986) from two open pits.

Unpatented mining claims located within the WSA are summarized in the following table taken from BLM records dated December, 1987.

Table 4 - Mining Claims

TYPE MINING CLAIM	NUMBER SUITABLE	 NONSUIT.	 TOTAL	ACRES SUITABLE	 NONSUIT.	 TOTAL
Lode	8	0	8	160	0	160
Placer	66	14	80	2,640	560	3,200
Mill Site	1	0	1	5	0	5
Total	75	14	89	2,805	560	3,365

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: In the suitable portion of the WSA, as a whole, wilderness values will be maintained. However, in the areas with high to moderate mineral potential and valid mining claims, site-specific impacts on wilderness values could occur. In the nonsuitable areas, a loss of naturalness caused by localized mineral development is expected.

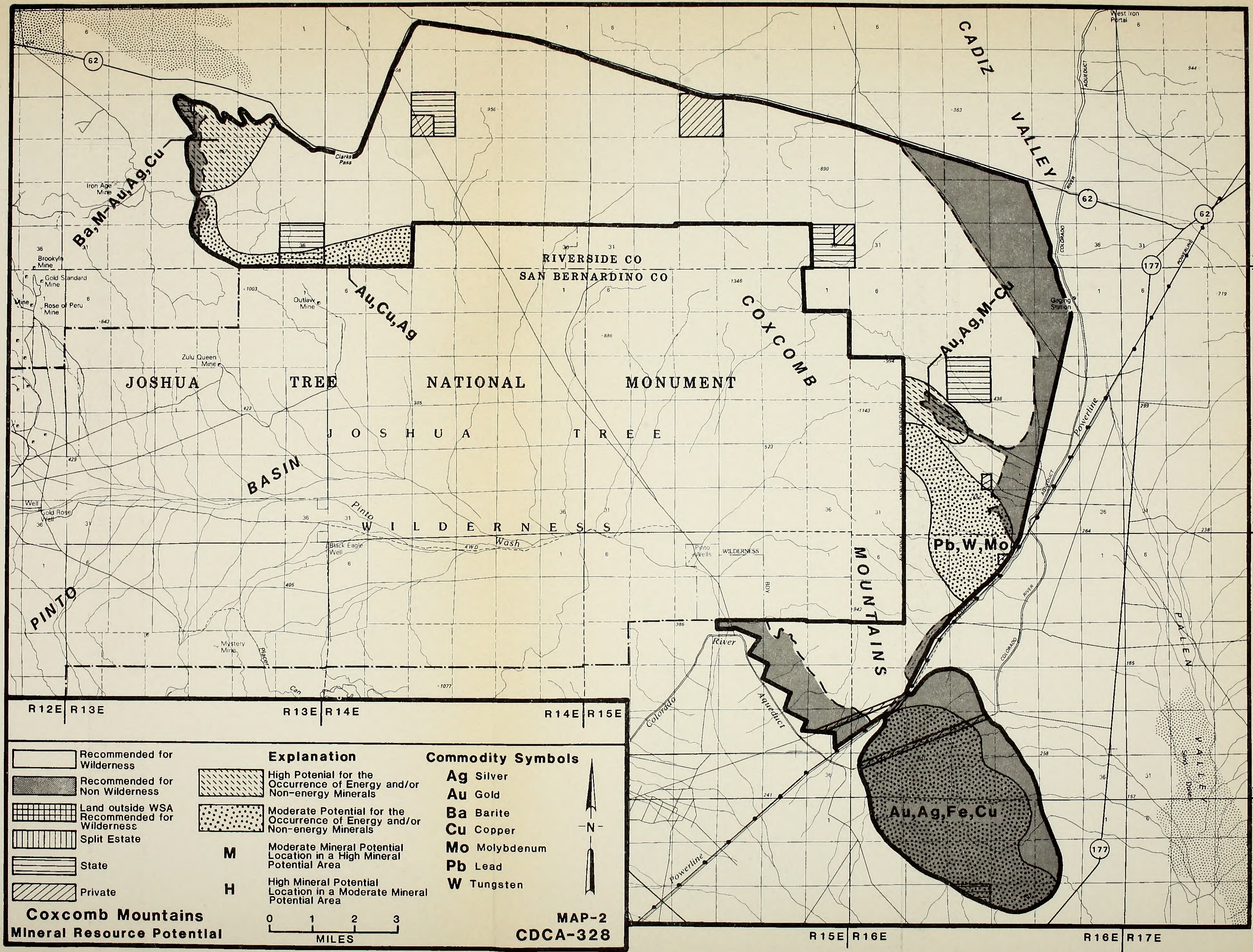
2. Impact on Locatable Mineral Exploration and Development: Locatable mineral exploration and development will suffer significant adverse impacts in those site-specific areas where development potential exists. In the nonsuitable portions of the WSA, exploration and development of mineral resources will continue, subject to the regulations stated in 43 CFR 3809 regarding surface disturbance as well as any additional constraints listed in the CDCA Plan.

3. Impact on Bighorn Sheep/Habitat: Within this WSA, virtually all bighorn sheep habitat is located in the suitable area. This habitat will remain in its present condition.

4. Impact on Desert Tortoise/Habitat: Tortoise habitat will be maintained in the suitable portion of this WSA. Negligible impacts to this species are expected in the nonsuitable areas. These impacts consist of occasional disturbances of individual tortoises by human intrusion.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.



Coxcomb Mountains
Mineral Resource Potential

MAP-2
CDCA-328

CADIZ VALLEY
COXCOMB MOUNTAINS
JOSHUA TREE NATIONAL MONUMENT
JOSHUA TREE WILDERNESS
PINTO BASIN
PALEN VALLEY
RIVERSIDE CO
SAN BERNARDINO CO
Ba,M-Au,Ag,Cu
Au,Cu,Ag
Au,Ag,M-Cu
Pb,W,Mo
Au,Ag,Fe,Cu
Iron Age Mine
Brooklyn Mine
Gold Standard Mine
Rose of Peru Mine
Outlaw Mine
Zulu Queen Mine
Black Eagle Well
Gold Rose Well
Mystery Mine
Pinto Wells
Pinto Wash
Clarks Pass
West Iron Portal
Gaging Station
Colorado River Aqueduct
Powerline
62
177
T1S
T2S
T3S
T4S
R12E R13E
R13E R14E
R14E R15E
R15E R16E
R16E R17E
Explanation
Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
Ag Silver
Au Gold
Ba Barite
Cu Copper
Mo Molybdenum
Pb Lead
W Tungsten
N
0 1 2 3
MILES

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Inaccuracies that are known to exist are noted in parentheses.

1. Inventory Phase: Comments generally agreed with the inventory team findings. An overwhelming majority addressed the southern portion of the Coxcombs, stating that this portion met wilderness criteria. A few comments mentioned specific intrusions, such as roads and mines. After field checks, the applicable intrusions were excluded from the recommended area.

2. Study Phase: Of the 25 comments received on this WSA, 17 favored wilderness designation. The majority of these urged the addition of the southern part of the Coxcombs, describing this area as "rugged, with parklike valleys" and as habitat for bighorn sheep. Seven respondents stated that the WSA should be designated because of its contiguity with designated wilderness Joshua Tree National Monument, and its complement to the Monument's wilderness qualities. Features listed as contributing to the area's wilderness values included rugged topography, opportunities for backpacking and "scrambling," Class I air quality, wildlife (bighorn sheep and kit fox), vegetation (one-leaf pinyon pine and cat-claw), natural water tanks, and the transition zone between Sonoran and Mojave Desert.

   Three people who commented were adamant against wilderness designation for this area, while five others mentioned sights and sounds which they thought would interfere with wilderness qualities, and necessitate boundary adjustments. Among these were the Colorado River Aqueduct and its service roads, State Route 177, a transmission line, evidence of mines, past military activities, and motorized vehicle use.

   Several of those who responded favored a designation of the area that would allow general recreational use, including four-wheel driving, camping, hunting, trailriding, backpacking, picnicking, nature studies, and motorcycles. The area has historic sites to visit, and is close enough to population centers for weekend use by urban residents. Two comments mentioned rockhounding as good in the area. Another multiple-use concern was mineral potential; one comment listed the mines which were near the roadless area, indicating perceived mineral potential in the Coxcomb Mountains.

   Two comments were received in response to the Public Input workbook (3/15/79). They recommended excluding the area from wilderness consideration because it cannot be practically managed.

3. Draft Plan Alternatives: Few comments specific to this WSA were received in response to the Draft Plan Alternatives. The National Outdoor Coalition (NOC), a coalition of mining, rockhounding, and ORV groups, recommended wilderness designation for all of the Class C area shown in the Balanced Alternative except that portion north of the Joshua Tree National Monument and west of the Coxcomb Mountains. The Sierra Club wanted wilderness status for the entire WSA.

4. Proposed Plan: Use oriented groups and conservation groups maintained the same positions described for the Draft Plan Alternative.

   No comments were received from local governments.

APPENDIX 1

ESTIMATED COSTS OF ACQUISITION OF NON-FEDERAL HOLDINGS WITHIN AREAS RECOMMENDED FOR DESIGNATION

COXCOMB MOUNTAINS WSA (CDCA-328)

PARCEL	LEGAL DESCRIPTION				TOTAL	NUMBER OF	TYPE OF OWNERSHIP BY ESTATE		PRESENTLY	PREFERRED	ESTIMATED COST OF ACQUISITION	
No.	TWNSHP	RNG	SEC	MERIDIAN	ACREAGE	OWNERS	SURFACE ESTATE	SUBSURFACE ESTATE	PROPOSED FOR ACQUISITION	METHOD OF ACQUISITION	LAND COSTS ($1000)	PROCESSING COSTS ($1000)
1	1S.	13E.	16	SBM	60	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
2	1S.	13E.	36	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
3	1S.	14E.	16	SBM	20	1	PRIVATE	PRIVATE	YES	PURCHASE	2.0	2.5
4	1S.	14E.	16	SBM	20	1	PRIVATE	PRIVATE	YES	PURCHASE	2.0	2.5
5	1S.	14E.	16	SBM	20	1	PRIVATE	PRIVATE	YES	PURCHASE	2.0	2.5
6	1S.	14E.	16	SBM	20	1	PRIVATE	PRIVATE	YES	PURCHASE	2.0	2.5
7	1S.	14E.	16	SBM	20	1	PRIVATE	PRIVATE	YES	PURCHASE	2.0	2.5
8	1S.	14E.	16	SBM	20	1	PRIVATE	PRIVATE	YES	PURCHASE	2.0	2.5
9	1S.	14E.	16	SBM	20	1	PRIVATE	PRIVATE	YES	PURCHASE	2.0	2.5
10	1S.	14E.	16	SBM	20	1	PRIVATE	PRIVATE	YES	PURCHASE	2.0	2.5
11	1S.	14E.	16	SBM	480	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
12	1S.	15E.	36	SBM	*(640)	4	PRIVATE	PRIVATE	YES	PURCHASE	64.0	10.0
13	1S.	15E.	36	SBM	160	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
14	1S.	15E.	16	SBM	480	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
15	2S.	16E.	16	SBM	160	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
16	2S.	16E.	16	SBM	480	1	STATE	STATE	YES	EXCHANGE	N/A	4.0

* Indicates parcel acreage is unknown. Total acreage for all parcels in a particular section are shown in ( ).

These figures were derived from Bureau Land Records and provide for more detail than GIS estimates and therefore may differ from acreage summaries in Table 1.

Eagle Mountains

CDCA 334

EAGLE MOUNTAINS WILDERNESS STUDY AREA (WSA)

(CDCA-334)

1. THE STUDY AREA --- 61,640 acres

The Eagle Mountains WSA is located in central Riverside County in the central portion of the California Desert Conservation Area (CDCA). Desert Center, located approximately five miles southeast of the WSA, is the nearest community. The WSA includes 58,462 acres of public land, administered by the Bureau of Land Management (BLM) and 3,178 acres of State lands (see Map 1 and Table 1).

The WSA is adjacent to Joshua Tree National Monument (JTNM), abutting a designated wilderness area within the Monument. The WSA's southern boundary is a narrow strip of private land containing the Colorado River Aqueduct tunnel. The eastern boundary continues along the aqueduct land, and topographic features. The northern boundary follows topographic features and the Black Eagle Mine Road. The Rainbow's End Mine, a patented mining claim, and the access road leading to the prospect have been cherrystemmed out of the WSA. The western boundary is the JTNM boundary.

The major features of this WSA are the Eagle Mountains and a large wash, known as Big Wash. Big Wash is the primary drainage for the eastern slope of this mountain range. The area is rugged and, except in the washes, sparsely vegetated. The topography of the area is diverse and extremely complex. Elevation varies from 4000 feet in the northern mountain peaks, to 1600 in the eastern end of Big Wash. Steep peaks, shear canyons, rugged rock outcrops, smooth bajadas, and large sheets of the desert-varnished rocks called desert pavement combine in constantly changing displays of desert scenery. The study area possesses unique vegetation as described in the Special Features section.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Various suitability recommendations were analyzed in the Draft and Final Environmental Impact Statements (EIS) for the CDCA Plan and a summary of the area's wilderness values was included in Appendix III of the Final EIS. Four different suitability recommendations were analyzed in the EIS's: no wilderness, all wilderness, and two partial wilderness recommendations of approximately 90% and 99% suitable.

2. RECOMMENDATION AND RATIONALE --- 54,612 acres recommended for wilderness
7,028 BLM acres recommended for nonwilderness

Partial wilderness (90%) is the recommendation for this WSA. The remaining 7,028 acres in this WSA recommended nonsuitable are released for uses other than wilderness. In addition to the Federal acreage recommended for wilderness, BLM recommends that 3,178 acres of State land be acquired through purchase or exchange and designated as wilderness. With acquisition of these inholdings, a total of 54,612 acres are recommended for wilderness.

Appendix 1 lists all inholdings and provides additional information on their acquisition. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The major portion of this WSA is recommended suitable because: (1) the area possesses outstanding wilderness values; (2) the area is adjacent to existing wilderness in JTNM; and (3) the area possesses numerous special features that would benefit from wilderness designation.

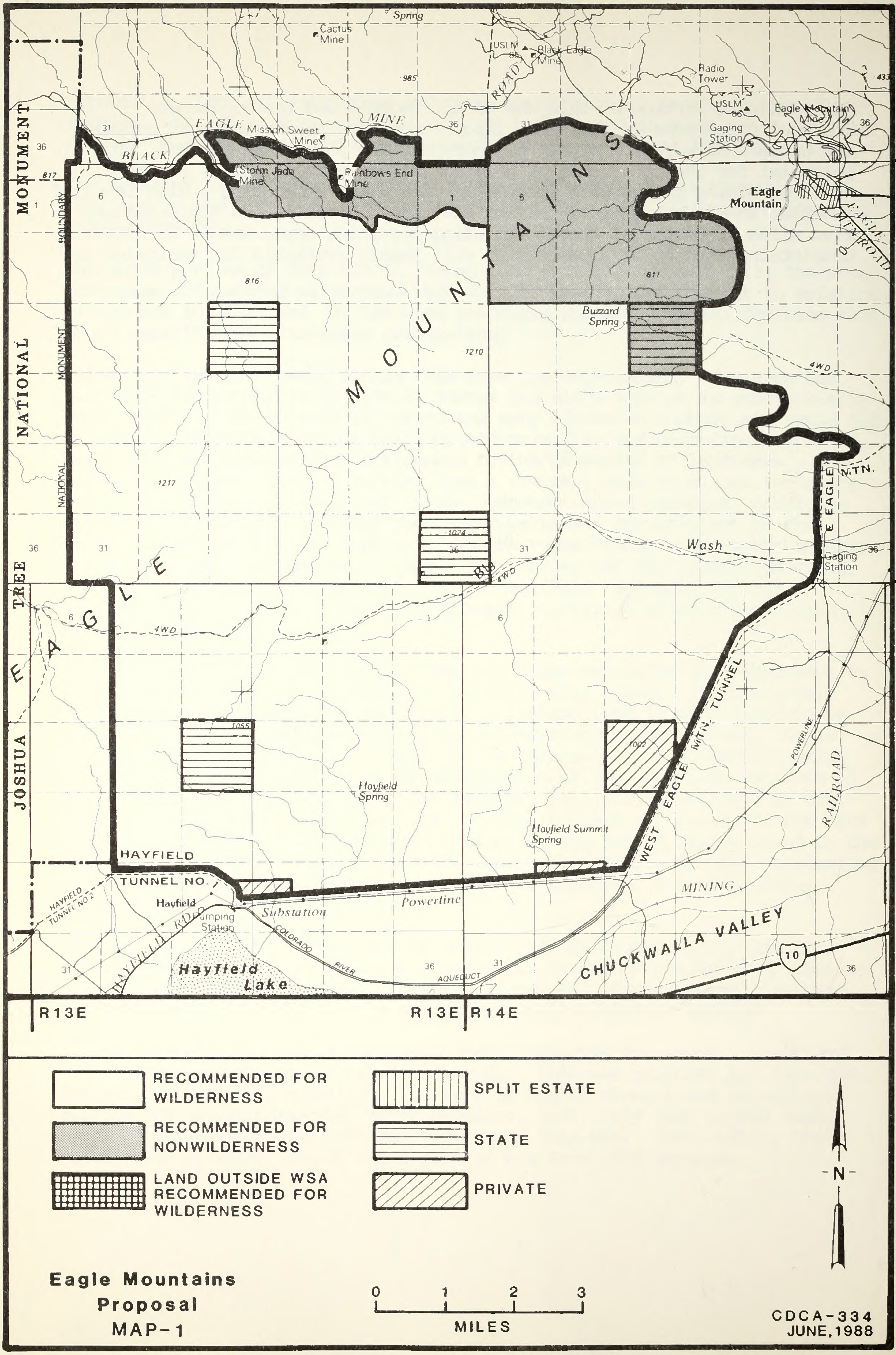
Wilderness values present within this area are outstanding. The area has been affected primarily by natural forces and man's imprint is substantially unnoticeable. The terrain is varied and many elevation changes are rapid and dramatic. Opportunities for solitude and primitive and unconfined types of recreation are outstanding, influenced by the diversity of landforms. A network of washes, varying in size from a few feet wide to almost two miles wide, lace their way in and out of the numerous canyon passages, providing countless hideaways. Isolated rock outcrops rising abruptly out of the washes, internal valleys, jumbles of smooth round boulders and sharp angular volcanic formations combine to form a fascinating and challenging panorama for the primitive recreationist. The suitabilitly recommendation will preclude any further vehicular use of approximately 30 miles of primitive access routes of travel.

Like the adjoining wilderness in JTNM, the Eagle Mountains WSA represents an outstanding example of diversity in the California Desert. The National Monument was established in the 1930's to protect what is considered to be some of the most unique terrain in the southwestern United States. Eagle Mountains WSA was originally a part of the monument but was removed during World War II in order to allow the development of the vast iron deposits in the north part of the mountain. The boundary that was established at that time was arbitrarily defined and not intended to mark the extent of the rare combination of landforms, vegetation, wildlife and scenic beauty found in the Monument. The Eagle Mountains WSA is a natural extension of this outstanding area. Designation of this area would enhance manageability of both the existing and proposed wilderness areas.

Special features within this suitable area include bighorn sheep habitat, desert tortoise habitat, potential occurrence of two sensitive plant species, and the existence of sensitive cultural resources. These special features are explained more fully in the Wilderness Characteristics section.

In the suitable area, conflicts with other resources are minor. Occasional off-highway vehicle use occurs in Big Wash. This use accounts for less than 200 visitor-use days annually. The area is highly mineralized throughout much of its extent; however, as of December, 1987, only four mining claims had been recorded in the suitable portion of this WSA. These mining claims cover only 80 acres, a very small part of the total WSA acreage.

The remaining portion of this WSA is not recommended for wilderness designation because it possesses important mineral resources that outweigh its wilderness values. Within the northeastern portion of the WSA, high potential for the occurrence of gold and silver exists. As of December, 1987, 89 mining claims were located in this area, indicating a high level of interest in mineral exploration and development. There are approximately five miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use.


Spring
Cactus Mine
USLM 85
Black Eagle Mine
ROAD
985
Radio Tower
USLM 86
Eagle Mountain Mine
Gaging Station
433
EAGLE
Mission Sweet Mine
MINE
BLACK
Storm Jade Mine
Rainbows End Mine
MOUNTAINS
Eagle Mountain
EAGLE MTN. ROAD
T3S
T4S
817
MONUMENT
BOUNDARY
NATIONAL
MONUMENT
NATIONAL
TREE
JOSHUA
816
811
Buzzard Spring
1210
4WD
1217
1024
E EAGLE MTN.
Wash
Big
4WD
Gaging Station
T4S
T5S
EAGLE
4WD
1055
1002
Hayfield Spring
WEST EAGLE MTN. TUNNEL
POWERLINE
RAILROAD
Hayfield Summit Spring
HAYFIELD
TUNNEL NO. 1
HAYFIELD TUNNEL NO 2
Hayfield
Pumping Station
Substation
Powerline
MINING
HAYFIELD RD
COLORADO RIVER AQUEDUCT
CHUCKWALLA VALLEY
10
Hayfield Lake
R13E
R13E
R14E
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES
CDCA-334
JUNE, 1988

Eagle Mountains Proposal MAP-1

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	58,462
Split Estate	(BLM surface only)	0
Inholdings		
State		3,178
Private		0
Total		61,640

Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	51,434
BLM	(outside WSA)	0
Split Estate	(within WSA)[1]	0
Split Estate	(outside WSA)[1]	0
Total BLM Land Recommended for Wilderness		51,434
Inholdings[1]		
State		3,178
Private		0

Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	7,028
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		7,028

---

[1] Appendix 1 is a detailed description of inholdings and split estate tracts included within the study. For purposes of this report, split estate lands are defined only as those lands with Federal surface and non Federal subsurface (minerals). Lands that have Federal minerals but non Federal surface should be classified in this report by the owner of the surface estate.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: There are few intrusions into the WSA and the majority of the area appears to have been affected primarily by natural forces. Within the interior and in the Big Wash area, only a few past mining operations are visible and these have been obscured by the elements over time. These indistinct scars do not detract from the primitive character of the land. The WSA's many sandy washes are used by off-highway vehicles, but signs of use are eliminated by rainfall. Joshua Tree National Monument to the west has acted as a barrier to eliminate random vehicle use.

2. Solitude: Opportunities for solitude can be found throughout the WSA. Canyons, boulder piles, interior valleys and, in the washes, vegetation, provide an unlimited source of intimate spaces. Outside of these areas, a sense of spaciousness with unlimited vistas in all directions exists. The opportunities for solitude are magnified by the isolation afforded by the proximity of JTNM.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: Opportunities for primitive and unconfined types of recreation abound within this WSA, and in conjunction with the wilderness opportunities available in the Monument, the variety of recreational experiences to be had are exceptional. Picnicking, hiking, rockhounding, and upland game hunting are popular activities within this WSA.

4. Special Features: Three areas of cultural sensitivity have been identified within the suitable area. Two are located in the northern portion and the third in the central portion of the WSA. In the north, stoneworking tools and debris have been recorded. In the central area, a number of prehistoric sites are located, the majority of which are petroglyph sites. This area is proposed to be nominated to the National Register of Historic Places. An average of five sites per square mile has been predicted in this area. This is substantially greater than the norm for this region.

   One rare plant species has been reported near the southwest corner of the WSA on the slopes northeast of Cholla Wash. This species, Alverson's foxtail cactus (Coryphantha vivipara var. alversonii), is a candidate for Federal listing as threatened/endangered and is currently under review by the U.S. Fish and Wildlife Service. This small cactus grows on rocky slopes in the Chuckwalla, Eagle and Little San Bernardino Mountains and may occur elsewhere in the WSA. Another rare plant has been documented in Boulder Canyon just outside the southeastern boundary of the study area. This large shrub, California snakebush (Colubrina californica), has also been proposed as a candidate for Federal listing as threatened/endangered. This species grows in sandy washes and steep gullies on the south face of the Eagle Mountains and in the Chuckwalla Mountains. Due to similar habitat available inside the WSA and proximity to known locations, California Snakebush is expected to occur within the study area.

The varied topography of this study area and the presence of three intermittent springs, support a variety of important wildlife species. Included among the wildlife which inhabit this area are desert bighorn and burro deer. The habitat within the study area is essential to the daily maintenance of these populations. The Eagle Mountains bighorn herd is estimated at 15 individuals. The eastern edge of this area includes five square miles of crucial habitat for desert tortoise.

B. Diversity in the National Wilderness Preservation System

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 58,462 acres of the American Desert/Creosote Bush-bur Sage ecosystem. The geological diversity and the variety of landforms within this WSA is a reflection of JTNM to the west and the Chuckwalla Valley to the east. The rugged mountain mass dictates the general character of the study area and provides a significant contrast to the surrounding alluvial fans and gently sloping washes. The WSA is exemplary of the Colorado Desert mountain ranges.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas		Other BLM Studies	
	areas	acres	areas	acres
	NATIONWIDE			
American Desert/Creosote Bush-bur Sage	3	126,033	48	1,513,602
	CALIFORNIA			
American Desert/Creosote Bush-bur Sage	2	26,427	20	919,141

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of seven major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a five-hour drive of the population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS areas areas	 acres	Other BLM Studies areas	 acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Oxnard-Ventura	23	2,195,198	85	2,703,260
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The WSA is within 50 air miles of eight BLM WSAs recommended for wilderness designation. The WSA is located adjacent to designated wilderness, administered by JTNM. Also within a 50 mile radius are Santa Rosa Wilderness Area, administered by San Bernardino National Forest and Anza Borrego Desert State Wilderness Area.

C. Manageability

The Eagle Mountains WSA is manageable as wilderness. Within the suitable area, there are few factors which would impede manageability. However, the nonsuitable area would be more difficult to manage.

The boundaries of the suitable areas are based on a combination of maintained dirt roads, topographic features and political boundaries. For the most part, these are easily manageable boundaries. The portion defined by roads will pose few problems since on the ground identification is easy. The portion defined by topography will require detailed maps and extensive signing to avoid inadvertent intrusions by vehicles. The remaining border, separating JTNM and the study area, although unidentifiable on the ground, would cause few, if any, problems. Wilderness uses on both sides would be compatible, eliminating the need for extensive boundary marking.

State lands within the WSA are proposed for acquisition (see Appendix 1). Because of their remoteness, the development potential for these parcels is limited. Their presence should not reduce manageability significantly.

The nonsuitable area would be extremely difficult to manage as wilderness. The northern boundary is almost entirely delineated by topography. Because of the intensive mineral activity to the north, this boundary would have to be heavily signed to ensure adjacent wilderness values are maintained. The area also contains 89 mining claims, as of December, 1987. Those claims with valid existing rights will be able to continue with mining activities that are necessary and reasonably incidental to the mining operation after designation. The only restrictions placed on these activities is that they not cause unnecessary or undue degradation, leaving sufficient latitude to cause severe impacts to existing wilderness values.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Eagle Mountain WSA is in the BLM Eagle Mountain Geology-Energy-Mineral (G-E-M) Resource Area (GRA). The wilderness portion of the 1980 CDCA Plan EIS (Volume B, Appendix III) stated that mineral resource data for the WSA had not been fully analyzed, integrated, and interpreted. However, the EIS did state that the WSA had "possible" potential for metals and saleable mineral resources. As of December, 1979 there were nine patented and "numerous" unpatented mining claims in the northern part of the WSA.

   In 1980, at the time of the suitability recommendation, mineral data in the GRA file for the Eagle Mountain GRA was not assessed for potential for occurrence, except for the area in the northeastern corner of the WSA, adjacent to the area of the Eagle Mountain iron mine. The GRA identified an unclassified potential for the occurrence of metals, uranium, and saleable materials in locations around this WSA.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should Be Considered in the Final Recommendation: In 1983, the U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (BOM) conducted a mineral survey of the suitable portion of the WSA. The results of the BOM survey were published in MLA 101-83, released in 1983. The following year, the joint report, OFR 84-631, produced by both USGS and BOM, was released. MLA 101-83 concluded that the geological features containing the productive deposits of iron, gold, lead, silver, and copper that have been mined throughout the Iron Mountain mining district, appear to be absent within the study area. However, the USGS/BOM joint report, OFR 84-631, indicated that the geologic environment is highly favorable for the occurrence of metallic mineral resources such as gold, silver, tungsten, molybdenum, bismuth, lead, and copper. This conclusion was based on additional sampling of the area as well as geological inference.

Stream sediment samples showed anomalous mineral concentrations for lead, bismuth, and tin in the WSA. Through the use of geologic, geochemical, and geophysical data and a survey of mines and prospects, USGS and BOM were able to classify the suitable portion of the WSA. They concluded that those parts of the WSA that are intruded by altered mafic dikes with associated quartz veins and shear zones have moderate to high potential for the presence of undiscovered gold, silver, and tungsten. High stream sediment concentrations of molybdenum also suggested that parts of those areas intruded by the dikes contain molybdenum minerals. The major portion of the WSA is classified under the BLM classification system as having a moderate potential for gold, silver, tungsten, and molybdenum resources. Localized areas of high potential for the occurrence of gold and silver resources in the northwest, central and south-central portions of the WSA were also reported by the USGS and BOM.

Although the GRA mentioned the possible existence of uranium in the WSA, the USGS/BOM report did not indicate any potential for uranium. The report did address the existence of anomalously high thorium concentrations, however, the principal ore-bearing materials for this element were not present. Using the BLM classification system, a low potential for the occurrence of thorium was assigned to this WSA.

The USGS/BLM report identified sand and gravel resources in the WSA. However, it is unknown whether the quantity and quality of the material is suitable for industrial purposes. The resource is assigned a low potential for occurrence under the BLM classification system.

There were no operating mines in the WSA as of December, 1987. However, exploration interest remains high. West of the Eagle Mountain Mine, a mining claimant continues annual drilling for assessment work along the WSA's north boundary. Unpatented mining claims located in the WSA are summarized in the following table taken from the BLM mineral records dated December, 1987.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	4	61	65	80	1,220	1,300
Placer	0	0	0	0	0	0
Mill Site	0	28	28	0	140	140
Total	4	89	93	80	1,360	1,440

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Within the suitable areas, wilderness values will be maintained. In the nonsuitable area, naturalness will suffer localized adverse impacts due to mineral exploration and development. These impacts will be concentrated on areas covered by mining claims, comprising approximately two percent of the entire WSA.

2. Impact on Locatable Mineral Exploration and Development: Within the suitable area, this activity will suffer adverse impacts. In the nonsuitable area, mineral exploration and development will be allowed to continue subject to the regulations stated in 43 CFR 3809 regarding surface disturbance, as well as any additional constraints stated in the CDCA Plan.

3. Impact on Cultural Resources: These sites, located within the suitable portion of the WSA, will enjoy increased protection under the proposed action. Designation of the area will result in slight adverse impacts because study of the sites will be hampered by the restrictions placed on the use of mechanized equipment and motorized vehicles.

4. Impact on Desert Bighorn Sheep/Habitat: The bighorn sheep habitat, located within the suitable area, will remain in its present condition. Placement of new water sources and general herd management will be somewhat impaired by the restrictions placed on mechanized equipment and motorized vehicles.

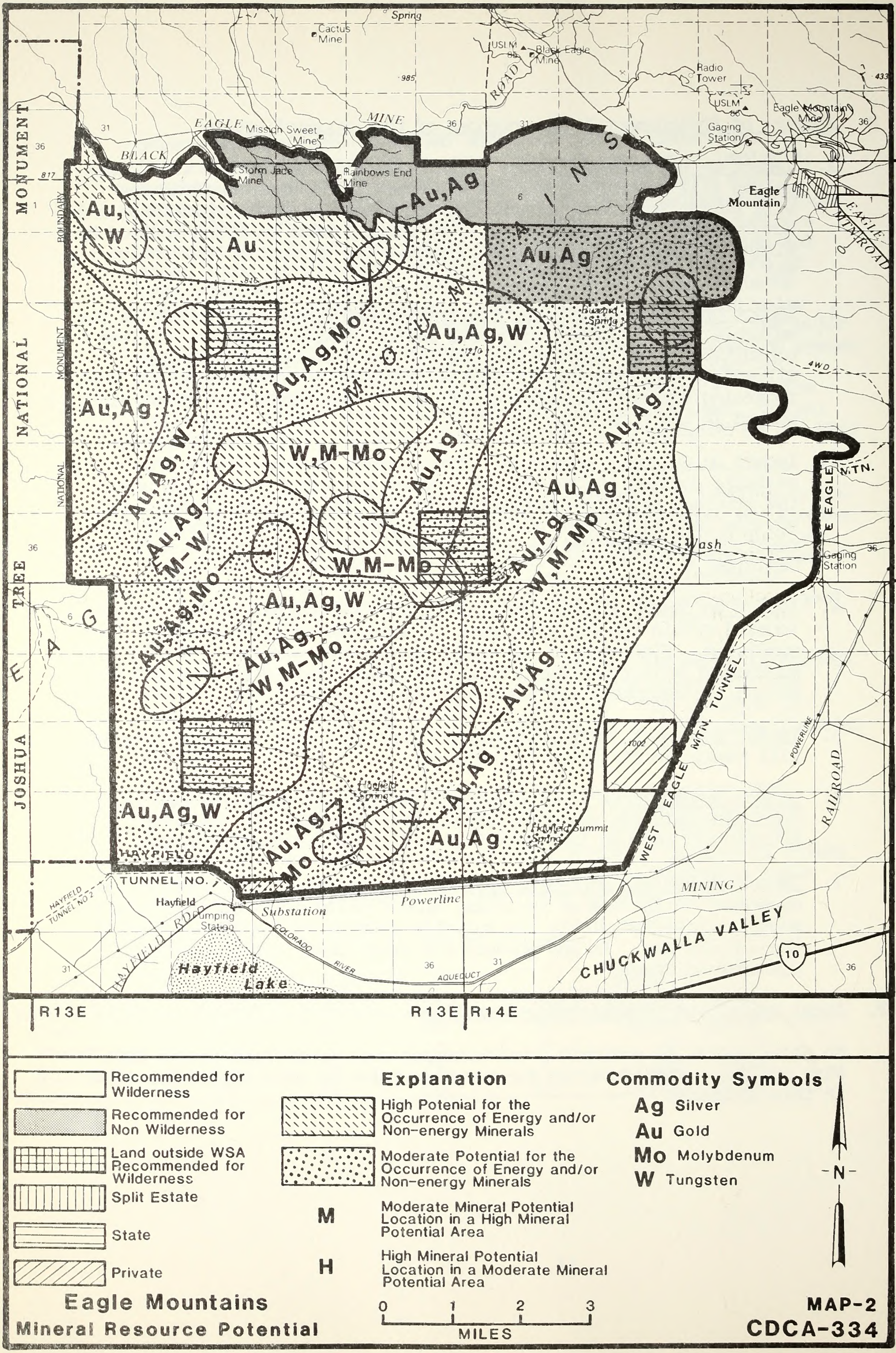
5. Impact on Desert Tortoise/Habitat: Tortoise habitat within this WSA will remain in its present condition.

6. Impact on Sensitive Plant Species: Habitat for these species is located within the suitable portion of this WSA. The proposed action will have no impact on the habitat or individual plants.

7. Impact on Vehicle Dependent Recreational Opportunities: Activities dependent on the use of vehicles, specifically rockhounding, will be sharply curtailed within the suitable portion of the WSA because of the vehicle ban. In the nonsuitable area, these activities will continue as usual.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.


Spring
Cactus Mine
USLM 88
Black Eagle Mine
985
Radio Tower
USLM 86
Eagle Mountain Mine
Gaging Station
ROAD
EAGLE MINE
BLACK
Mission Sweet Mine
Storm Jade Mine
Rainbows End Mine
MONUMENT
NATIONAL
JOSHUA TREE
MONUMENT BOUNDARY
NATIONAL MONUMENT
817
816
Eagle Mountain
EAGLE MTN ROAD
MOUNTAINS
EAGLE
Au, W
Au
Au,Ag
Au,Ag,Mo
Au,Ag,W
Buzzard Spring
Au,Ag
Au,Ag,W
W,M-Mo
Au,Ag, M-W
Au,Ag,Mo
Au,Ag, W,M-Mo
Au,Ag,W
4WD
Wash
E EAGLE MTN.
Gaging Station
T3S
T4S
T4S
T5S
1002
Hayfield Spring
Hayfield Summit Spring
WEST EAGLE MTN. TUNNEL
HAYFIELD
TUNNEL NO. 1
HAYFIELD TUNNEL NO. 2
Hayfield
Pumping Station
Substation
Powerline
MINING
POWERLINE
RAILROAD
HAYFIELD RD.
COLORADO RIVER AQUEDUCT
Hayfield Lake
CHUCKWALLA VALLEY
10
31
36
6
1
R13E
R13E
R14E
Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
Ag Silver
Au Gold
Mo Molybdenum
W Tungsten
N
0 1 2 3
MILES

Eagle Mountains
Mineral Resource Potential

MAP-2
CDCA-334

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Inaccuracies that are known to exist are noted in parentheses.

1. Inventory Phase: The majority of public comments supported further consideration of this area as an extension of Joshua Tree National Monument. Several of those who commented supported the findings regarding roads and mining activity. Other comments opposed to inclusion of this area were too general to validate in the field.

2. Study Phase: Of the 55 letters received on this WSA, 28 opposed inclusion of this area for wilderness study or recommended reduction in its size. Those supporting multiple use designation described extensive mineralization in the area, including deposits of copper, iron, lead, metallic sulfides, borates, and precious metals. Comprehensive studies, including aerial geophysical surveys, were strongly urged for this WSA to determine mineralization prior to wilderness study designation. The geology of the area also attracts rockhounds. According to one respondent, rockhounding accounts for 850,000 visitor-use days annually in the desert, thereby contributing considerably to the State's economy and providing a vital recreational pursuit to its members, particularly to the 42 percent who are over 50 years of age and require vehicles for access. Other comments described good camping, sightseeing, and motorized vehicle opportunities in the WSA. Sight-and-sound intrusions pointed out were: Eagle Mountain Railroad, Colorado River Aqueduct, Interstate 10, aircraft, and the Eagle Mountain Mine. The area has also been a site for the Fast Camel Race.

   Supporters of wilderness designation mentioned most frequently the contiguity of this area with wilderness lands in Joshua Tree National Monument. Other features of this WSA which the public felt merit protection were: colorful metamorphic rock formation, Class I air quality, oases of fan palms (none located in this WSA), bighorn sheep and mountain lion habitats, and other diverse flora and fauna, including spring floral displays and the ironwood stands in the southeast corner of the area, nature study, educational opportunities, rockclimbing, proximity to metropolitan areas, hiking--particularly a walk to Lost Palms from Cottonwood Springs--and access to roads to Joshua Tree National Monument.

   Several comments were received in response to the Public Input Workbook (3/15/79). The recommended that the area be joined with JTNM.

3. Draft Plan Alternatives: Few comments were specific to this particular WSA. The National Outdoor Coalition (NOC), a coalition of mining, rockhounding, and OHV groups, recommended that the area

be designated for medium use, except for a small section in the southern portion, which would be designated for limited use. A large number of club members sent in coupons and letters supporting this position. The Sierra Club and many conservation-oriented organizations favored wilderness status for the entire WSA.

4. Proposed Plan: Kaiser Steel Corporation, the operator of an iron mine located in a three mile corridor between this WSA and the JTNM, stated that future mineral needs would require expansion of their mines into the WSA (these mines have since closed). Mining had been done in this location in the past, and recent prospecting had shown that mining would probably resume in the future. As a result, the northern boundary of the WSA was adjusted to exclude sections 1 through 12, T. 4 S., R. 14 E.; this area was redesignated for limited use.

   One comment requested that the intensive use area north of the WSA be eliminated and change to limited use. Other comments repeated the same positions listed earlier.

   No comments were received from local governments.

APPENDIX 1
ESTIMATED COSTS OF ACQUISITION OF NON-FEDERAL HOLDINGS WITHIN AREAS RECOMMENDED FOR DESIGNATION
EAGLE MOUNTAINS WSA (CDCA-334)

PARCEL No.	LEGAL DESCRIPTION TWNSHP	RNG	SEC	MERIDIAN	TOTAL ACREAGE	NUMBER OF OWNERS	TYPE OF OWNERSHIP BY ESTATE SURFACE ESTATE	SUBSURFACE ESTATE	PRESENTLY PROPOSED FOR ACQUISITION	PREFERRED METHOD OF ACQUISITION	ESTIMATED COST OF ACQUISITION LAND COSTS ($1000)	PROCESSING COSTS ($1000)
1	5S.	14E.	16	SBM	610	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
2	5S.	13E.	16	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
3	4S.	13E.	16	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
4	4S.	13E.	16	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0

These figures were derived from Bureau Land Records and provide for more detail than GIS estimates and therefore may differ from acreage summaries in Table 1.

Pinto Basin

CDCA 334A

PINTO BASIN WILDERNESS STUDY AREA (WSA)

(CDCA-334A)

1. THE STUDY AREA --- 3,604 acres

The Pinto Basin WSA is located in central Riverside County in the central portion of the California Desert Conservation Area (CDCA). Indio, 60 miles to the southwest is the nearest community. The WSA consists of 3,604 acres of BLM land. No private lands are included within the boundaries of this WSA (see Map 1 and Table 1).

Pinto Basin WSA is roughly square in shape. The northern and western boundaries are formed by the boundary of Joshua Tree National Monument (JTNM). The southern boundary follows Black Eagle Mine Road. To the east, the boundary follows an unnamed jeep trail between Black Eagle Mine Road and the Monument boundary.

This WSA encompasses a portion of the bajada known as Pinto Basin. This area slopes gently, the relative flatness broken only by a few shallow washes. Vegetation consists of scattered creosote. Elevation varies from 2,000' in the southeast to 1,750' in the northwest.

The WSA was studied under Section 202 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EIS) for the CDCA Plan: the protection, use, balanced and no action alternatives; a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

0	acres recommended for wilderness
3,604	BLM acres recommended for nonwilderness

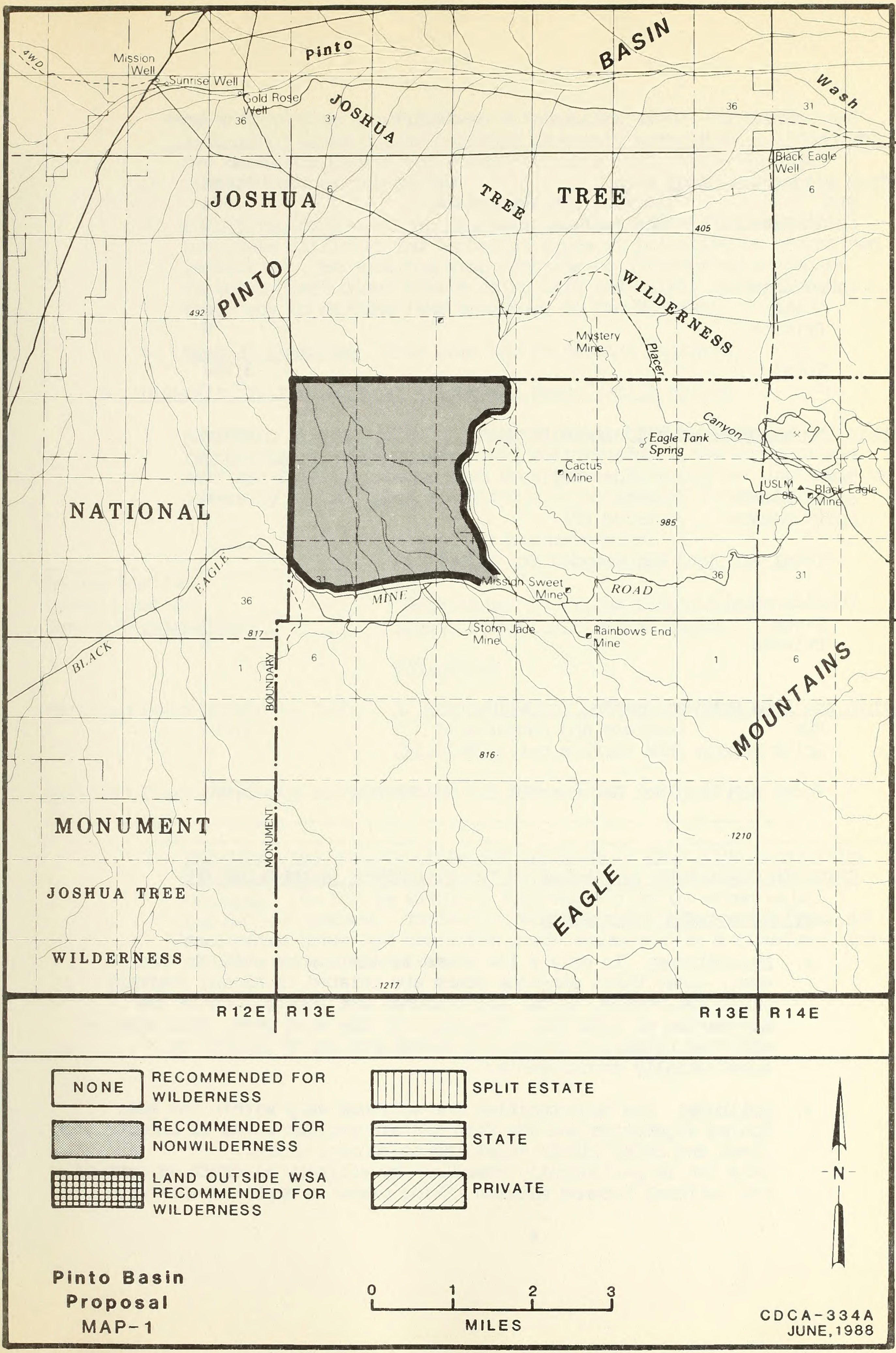
No wilderness is the recommendation for this WSA. The entire acreage in this WSA is released for uses other than wilderness. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Overview.

This area is not recommended for inclusion in the National Wilderness Preservation System (NWPS) because its wilderness values are marginal, and do not outweigh the area's potential for mineral exploration and development. Within some areas of the WSA, naturalness has been impacted by mineral exploration and development. Primitive routes, adits, and trenches exist as evidence of man's activities. The remaining area, although influenced solely by the forces of nature, lacks any unique or interesting features. Here, nature is expressed as a bleak landscape. Opportunities for solitude and primitive and unconfined types of recreation are limited by the level topography. There is little to provide a sense of seclusion to visitors of the area. The vastness of the area provides the only measure of solitude. Primitive recreation is strictly limited by the even terrain, leaving only a few activities available for the recreationists within this WSA. There are approximately three miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use.

The northeast and southwest portions of this WSA possess moderate potential for the occurrence of copper, gold and lead. One prospect in the south central portion of the WSA developed an extensive copper vein. Mineral potential is discussed further in the Energy and Mineral Resource Values Section.

Extensions of this ecosystem are already represented in the NWPS in the adjacent designated wilderness areas of JTNM. These wilderness areas contain vast tracts of the Pinto Basin bajada. The addition of Pinto Basin WSA would add no new landforms, ecological systems, nor geological formations. It would simply be an extension, a miniature replica, of the thousands of acres of wilderness located in northeastern JTNM.


Mission Well
Sunrise Well
Gold Rose Well
Pinto
BASIN
Wash
4WD
JOSHUA
36
31
36
31
T2S
T3S
Black Eagle Well
JOSHUA
TREE
TREE
6
1
6
405
PINTO
492
WILDERNESS
Mystery Mine
Placer
Canyon
Eagle Tank Spring
Cactus Mine
USLM 88
Black Eagle Mine
NATIONAL
985
EAGLE
31
36
Mission Sweet Mine
ROAD
MINE
36
31
T3S
T4S
817
Storm Jade Mine
Rainbows End Mine
BLACK
BOUNDARY
1
6
1
6
MOUNTAINS
816
1210
MONUMENT
MONUMENT
JOSHUA TREE
EAGLE
WILDERNESS
1217
R12E
R13E
R13E
R14E
NONE
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES

Pinto Basin Proposal
MAP-1

CDCA-334A
JUNE, 1988

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	3,604
Split Estate	(BLM surface only)	0
Inholdings		
State		0
Private		0
Total		3,604
Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	0
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		0
Inholdings		
State		0
Private		0
Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	3,604
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		3,604

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: In only a few areas is man's work evident, and in every case, these man-made scars are related to mining activity. Primitive routes, adits, and trenches are located within the boundaries of this WSA. However, for the most part, this area is affected primarily by natural forces and man's imprint is substantially unnoticeable.

2. Solitude: The opportunities for solitude vary within the WSA. Sparse vegetation and the flat terrain provide miles of unrestricted views and offer little shielding to conceal users.
This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military

operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: The area's flat terrain precludes difficult and technical types of primitive or unconfined recreation. Because the area contains no interesting or unique features, infrequent hikers using this WSA simply pass through, on their way to destinations somewhere in the Monument.

4. Special Features: This area has no special features.

B. Diversity in the National Wilderness Preservation System

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 3,604 acres of the American Desert/Creosote Bush ecosystem. It would not increase the diversity of the types of ecosystems represented in the NWPS.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas		Other BLM Studies	
	areas	acres	areas	acres
	NATIONWIDE			
American Desert/Creosote Bush	1	343,753	117	4,264,305
	CALIFORNIA			
American Desert/Creosote Bush	1	343,753	88	3,650,501

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of seven major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a five-hour drive of the population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS areas areas	 acres	Other BLM Studies areas	 acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Oxnard-Ventura	23	2,195,198	85	2,703,260
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The WSA is within 50 air miles of eight BLM WSAs recommended for wilderness designation. The WSA is adjacent to existing designated wilderness in Joshua Tree National Monument, managed by the National Park Service. Also within a 50 mile radius are Santa Rosa Wilderness Area, administered by San Bernardino National Forest, and Anza Borrego Desert State Wilderness Area.

C. Manageability

The Pinto Basin WSA is easily manageable as wilderness. Readily definable boundaries and adjacent compatible use in JTNM, positively influence the area's manageability. However, development of valid mining claims would adversely affect wilderness values and create manageability problems for the WSA.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Pinto Basin WSA is located in the BLM Eagle Mountain Geology-Energy-Mineral (G-E-M) Resource Area (GRA). G-E-M data in the wilderness portion of the CDCA Plan EIS (Volume B, Appendix III) stated that mineral resource data for the WSA had not been fully analyzed, integrated, and interpreted during

the 1980 recommendation process. The EIS did state, however, that the WSA had potential (undefined) for metallic minerals and limestone. Two patented mining claims were noted within the WSA in 1980.

GRA data in 1980 was insufficient to classify the potential for occurrence of mineral resources in the WSA.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Recommendation: Mineral surveys for this WSA were conducted by the U.S. Geological Survey and Bureau of Mines (BOM) and are included in the reports for the Eagle Mountains WSA (CDCA-334).

   The geology of the WSA indicates that it is principally underlain by Quaternary conglomerate rocks, Tertiary basalt, and alluvium in drainages. In the southwestern portion of the area, Mesozoic granitic rocks outcrop, and in the northeastern corner, Pre-Cretaceous metamorphic rocks outcrop. One mineral development within the WSA was noted by the California Division of Mines and Geology which shows in Copper in California (1948, Bulletin 144, pg. 294) that the Nancy prospect located in the south central portion of the WSA consisted of a 130 foot shaft developing a four foot wide vein of copper minerals on a diorite-quartz monzonite contact. No production was recorded. The WSA is located approximately six miles west of the Black Eagle copper mine (Black Eagle Copper Mining District). At the Black Eagle mine, approximately 100,000 pounds of copper, and important production of lead and gold was produced during the period from 1925 to 1926. Production was from a vein along a diorite-quartzite contact.

   The area of granitic intrusion in the southwestern portion and northeastern corner of the WSA is favorable for replacement type copper-gold-lead deposits similar to the Black Eagle mine area. This coupled with the known occurrence at the Nancy prospect and Black Eagle Mine suggests, under the BLM classification system, that the southwestern and northeastern portion of the WSA with exposed intrusive and/or Pre-Cretaceous metamorphic rocks should be considered as having a moderate potential for copper, gold and lead resources (see Map 2).

   Mining claimants have continued exploration in an area between the eastern WSA boundary and the limit of the Eagle Mountain Mine. Although the mining claimants have expressed an interest in exploration of the WSA, they have not submitted a mining plan of operation with the BLM for activity within the WSA.

   The two patented mining claims noted in the 1980 EIS at the Cactus Mine are not located within the boundary of the WSA. Unpatented mining claims located in the WSA are summarized in the following table taken from BLM records dated December 1987.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	N/A	2	2	N/A	40	40
Placer	N/A	0	0	N/A	0	0
Mill Site	N/A	0	0	N/A	0	0
Total	N/A	2	2	N/A	40	40

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Mineral development will cause localized impacts in the mineralized areas, comprising approximately 15% of the WSA. Elsewhere in the WSA, existing management guidelines, coupled with extremely low use levels, will ensure the integrity of wilderness values.

2. Impact on Locatable Mineral Exploration and Development: Mineral exploration and development will be allowed to continue subject to the regulations stated in 43 CFR 3809 regarding surface disturbance as well as any additional constraints stated in the CDCA Plan.

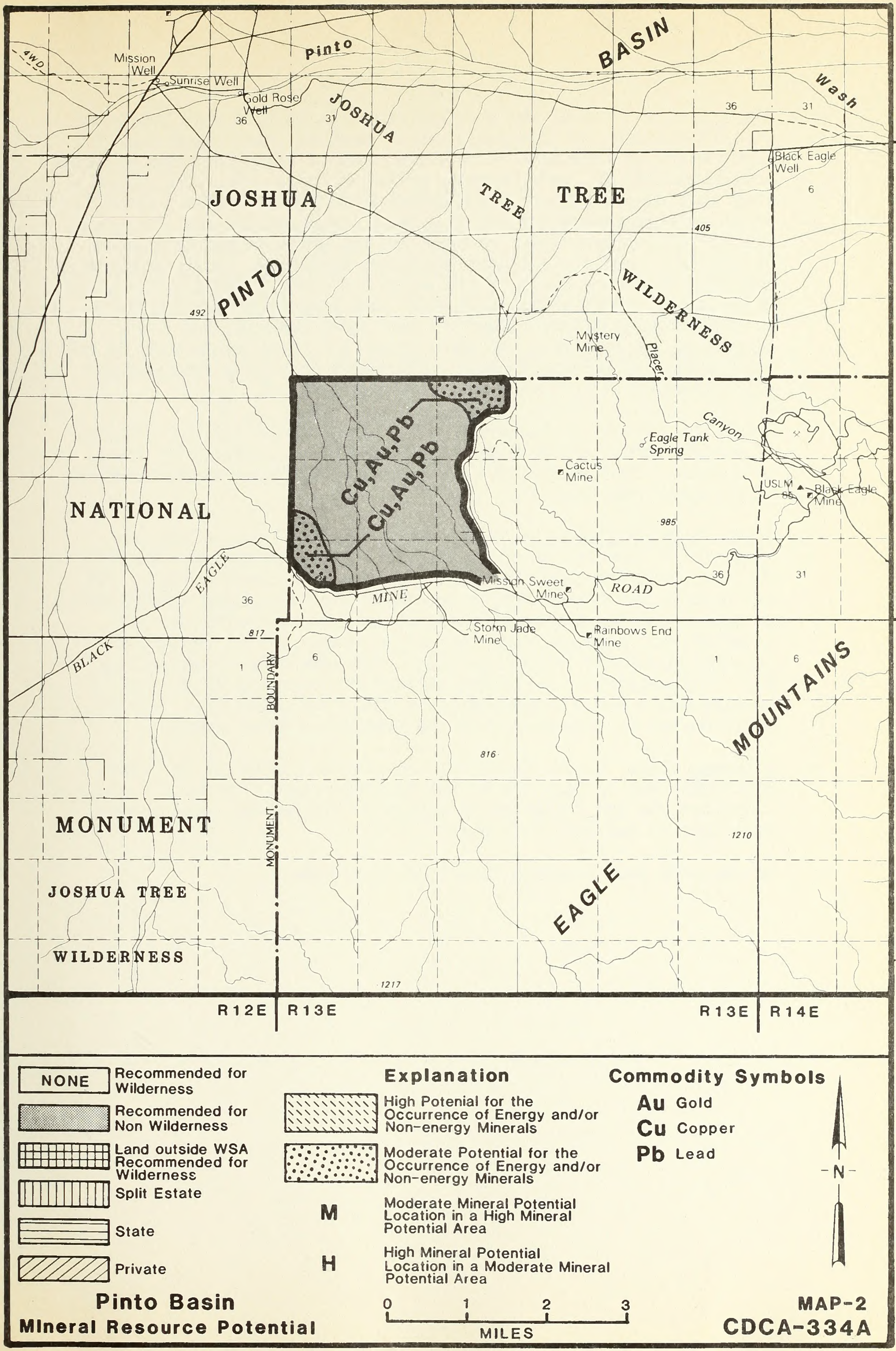
F. Local Social and Economic Considerations

No local social or economic considerations were identified in the Final CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Inaccuracies that are known to exist are noted in parentheses.

1. Inventory Phase: A few comments were received supporting the inclusion of the western portion of the area for further wilderness study. Most comments also urged the addition of the eastern two-thirds of the area. Other respondents mentioned the presence of mining activities which affect the natural character of the area.


PINTO BASIN
Pinto Wash
4WD
Mission Well
Sunrise Well
Gold Rose Well
Black Eagle Well
JOSHUA TREE NATIONAL MONUMENT
PINTO
JOSHUA TREE WILDERNESS
Mystery Mine
Placer Canyon
Eagle Tank Spring
Cactus Mine
USLM 85
Black Eagle Mine
Cu,Au,Pb
Cu,Au,Pb
Mission Sweet Mine
BLACK EAGLE MINE ROAD
Storm Jade Mine
Rainbows End Mine
MONUMENT BOUNDARY
EAGLE MOUNTAINS
JOSHUA TREE WILDERNESS
405
492
985
817
816
1210
1217
36
31
6
1
T2S
T3S
T3S
T4S
R12E
R13E
R13E
R14E
NONE
Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M
Moderate Mineral Potential Location in a High Mineral Potential Area
H
High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
Au Gold
Cu Copper
Pb Lead
N
0
1
2
3
MILES

Pinto Basin
Mineral Resource Potential

MAP-2
CDCA-334A

2. Study Phase: Nine of the fourteen comments on this area supported WSA designation for this small area. Most of these noted that designation of this area as wilderness would complement the existing wilderness within JTNM; in fact, three of those responding urged that this area be added to the National Monument. Other values which were mentioned for WSA 344A were its primitive and untouched nature, the opportunities it provides for solitude and primitive recreation , and its outstanding scenic qualities. Also included in the area is a tiny oasis of fan palms and habitat for bighorn sheep, which do not occur within this WSA. One respondent described the unique "angular gracefulness" of the Eagle, Coxcomb, and Black Mountains, as seen from the Pinto Basin and urged protection of the north face of the Eagle Mountains (outside this WSA) from mining disfigurement.

   Those who opposed wilderness for this area emphasized the presence of mining scars, active mines, roads and other evidence of man's activities. The prediction was made that the Eagle Mountains Mine will expand into WSA 344A.

3. Draft Plan Alternatives: No comments specific to this WSA were received in response to the Draft Plan Alternatives. The National Outdoor Coalition (NOC), a coalition of mining, rockhounding, and off-highway vehicle groups, recommended a multiple-use designation of medium use for the area; this was in agreement with the Use Alternative. A large number of club members sent in letters or coupons supporting the NOC position. Conservation organizations and their supporters wrote may letters recommending wilderness consideration for a large number of WSAs, including 344A. This position was in agreement with the Protection Alternative.

4. Proposed Plan: Again, there were no specific comments on this particular WSA in response to the Proposed Plan. The NOC organizations and conservation groups maintained the same general positions as for the Draft Plan.

   No comments were received from local governments.

Pinto Mountains

CDCA 335

PINTO MOUNTAINS WILDERNESS STUDY AREA (WSA)

(CDCA-335)

1. THE STUDY AREA --- 33,858 acres

The Pinto Mountains WSA is located in San Bernardino and Riverside Counties within the south central portion of the California Desert Conservation Area (CDCA). The community of Twentynine Palms is less than five miles from the northwest tip of the WSA. The WSA includes 31,878 acres of public land under the jurisdiction of the Bureau of land Management (BLM) and 1,980 acres owned by the State of California (see Map 1 and Table 1).

The WSA is ameboid in shape because it is located in an area that has a long history of mining activity. The west, north, and east boundaries meander around developed mining areas, generally approximating ridgelines or dry washes. The southern boundary of the WSA abuts the designated Joshua Tree Wilderness in the Joshua Tree National Monument (JTNM).

The WSA consists of portions of the northern Pinto Mountain Range and the eastern half of the Twentynine Palms Mountains. Most of the area is dominated by steep but generally rounded hills, vegetated with creosote and mixed desert shrubs. Vegetation becomes more diverse in the washes, consisting of smoke tree and other typical wash-type plants. Stands of Mohave yucca exist within many of the interior valleys. Elevations in the WSA range from 1860 to 4562 feet.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EIS) for the CDCA Plan, protection, use, balanced, and no action, a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

0	acres recommended for wilderness
31,878	BLM acres recommended for nonwilderness

No wilderness is the recommendation for the Pinto Mountains WSA. The entire acreage in this WSA is released for uses other than wilderness. Future activities will be controlled by moderate intensity management as prescribed in the CDCA Plan. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The adjacent wilderness in JTNM will not be negatively impacted by this recommendation. While designation of this WSA as wilderness would expand existing opportunities, Joshua Tree Wilderness has more than sufficient values to stand on its own without further alteration or supplements.

Known and potential mineral values plus the potential for vehicle dependant recreation were of greater significance than the area's value as wilderness. The scenery in the area is not distinctive. Designation of the area as wilderness would not contribute any additional unique or distinct features to the National Wilderness Preservation System (NWPS). Other WSAs in the California Desert that are recommended suitable offer a more extensive and diverse representation of desert wilderness values. There are approximately two miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use.

Known areas of mineral reserves permeate the bulk of the entire WSA. High potentials for gold are located in the southeast area of the WSA. The eastern one third of the WSA has moderate potentials for gold, limestone, and uranium/thorium. The western one third of the WSA has moderate potential for the occurrence of the rare earth elements, yttrium and cerium. The north central portion of the WSA has moderate potential for the occurrence of dimension stone.

The east, north, and west boundaries of the Pinto Mountains WSA are rimmed with historic evidence of mineral exploration and production. Music valley is just west of the WSA and contains at least five historic gold mines. The Marbolite, Gypsy, Maria, Groover, Star, and Dalton Mines rim the WSA to the north and east. Numerous other mines are also located within several miles of the WSA boundaries.

Historical recreation use within the WSA boundaries is low. However, potentials for increase are good. Immediately west of the WSA within the Gold Peak, Music Valley area, there currently exist moderate levels of vehicle dependant recreation use including camping, hunting, trail riding, photography, driving for pleasure and prospecting.

Cultural resource sensitivity is high, most of which is related to historic mining activities. Increases in vehicle-dependent recreational opportunities, because of an expanded network of access routes for mining exploration and development, could negatively impact cultural resource sites.

The wildlife and vegetative resources within the area are typical of the surrounding desert. The area contains no unusual plants or State or State- or Federal-listed threatened or endangered plant or animal species. Habitat for two BLM sensitive species, the desert tortoise and the desert bighorn sheep, is known to exist within the WSA. However, the sheep habitat is transitory range and only three square miles of the WSA contains tortoise habitat.

The WSA would be best managed under nonwilderness and moderate intensity management guidelines as prescribed in the CDCA Plan. Full development of the mineral resources would be possible. Significant impacts to other resources would be minimized where possible.

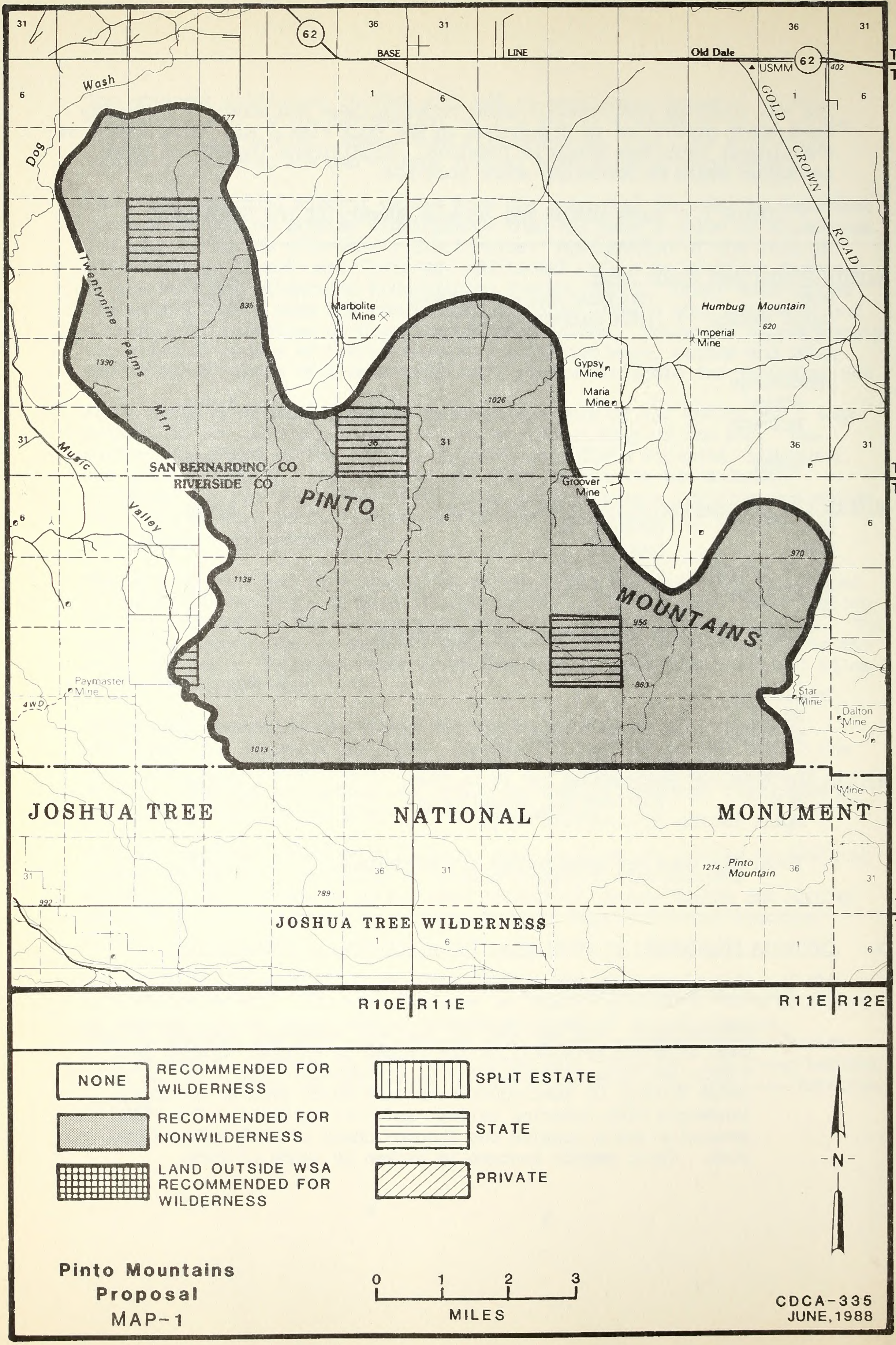
TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	31,878
Split Estate	(BLM surface only)	0
Inholdings		
State		1,980
Private		0
Total		33,858
Within the Recommended Wilderness Boundary		**Acres**
BLM	(within WSA)	0
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		0
Inholdings		
State		0
Private		0
Within the Area Not Recommended for Wilderness		**Acres**
BLM	(surface and subsurface)	31,878
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		31,878

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The majority of the area generally appears to have been affected primarily by the forces of nature. Scenic quality within the area is considered only moderate. The area contains a large cluster of contiguous mountains which from an enclosed landscape with interior valleys and rolling hills. The Pinto mountains are a massive but rounded chain of dark colored granitic rock. Their smooth texture is broken by bands of rock.


62
BASE LINE
Old Dale
USMM
402
T1N
T1S
T2S
T3S
GOLD CROWN ROAD
Dog Wash
Twentynine Palms Mtn
Music Valley
SAN BERNARDINO CO
RIVERSIDE CO
Marbolite Mine
Humbug Mountain
Imperial Mine
Gypsy Mine
Maria Mine
Groover Mine
PINTO MOUNTAINS
Paymaster Mine
4WD
Star Mine
Dalton Mine
Mine
JOSHUA TREE NATIONAL MONUMENT
Pinto Mountain
1214
JOSHUA TREE WILDERNESS
677
835
1330
1026
1139
1013
956
863
970
620
789
992
R10E
R11E
R11E
R12E
NONE
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0 1 2 3
MILES

Pinto Mountains
Proposal
MAP-1

CDCA-335
JUNE, 1988

2. Solitude: Outstanding opportunities for solitude are available in the area due to topographic variations. However, the surrounding influences of the extensive man made features related to mining are often visible from within the WSA boundaries and are a constant reminder of man's presence in the area.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: The adjacent designated wilderness in Joshua Tree National Monument expands opportunities for solitude as well as providing for outstanding opportunities for primitive and unconfined types of recreation.

4. Special Features: The WSA contains 11 square miles of transient desert bighorn sheep habitat. The sheep, on an infrequent basis, use the habitat to travel between adjacent mountain ranges. There is also three square miles of desert tortoise habitat with densities of 20 to 50 individuals per square mile. The tortoise is currently a candidate for listing as a threatened species by the U.S. Fish & Wildlife Service. The remaining landforms, ecological diversity, and geological features are not unusual, they are typical of features common throughout the surrounding deserts and mountains.

B. Diversity in the National Wilderness Preservation System

1. Assessing the diversity of natural systems and features as represented by ecosystems: The WSA contains 31,878 acres of the American Desert/Creosote bush (Larrea) ecosystem, which is represented in other WSAs that are recommended suitable for wilderness in the CDCA. The Pinto Mountains WSA would not increase the diversity of the types of ecosystems represented in the NWPS.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas		Other BLM Studies	
	areas	acres	areas	acres
	NATIONWIDE			
American Desert/Creosote Bush	1	343,753	117	4,236,031
	CALIFORNIA			
American Desert/Creosote Bush	1	343,753	88	3,622,227

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of eight major population centers. The wilderness values are not distinguished. Table 3 summarizes the number and acreage of designated areas and BLM study areas within a five-hour drive of the population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas		Other BLM Studies	
	areas	acres	areas	acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Bakersfield	32	4,071,358	128	3,998,548
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Oxnard-Ventura	23	2,195,198	85	2,703,260
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The WSA is within 50 air miles of ten BLM WSAs recommended for wilderness designation. The closest designated wilderness area is Joshua Tree Wilderness, administered by Joshua Tree National Monument, which abuts the southern border of the WSA.

C. Manageability

The Pinto Mountains WSA is manageable as wilderness. However, one significant issue would complicate manageability of the area for wilderness.

The WSA and surrounding area has a long and intense history of mineral exploration and development. The area contains known mineral values. Full scale development of any valid mining claims has a high potential to impact significant portions of the entire WSA. Access requirements for such development would result in similar impacts.

The WSA also contains four parcels of inholdings owned by the State of California that possess identified mineral potentials. These lands are managed to produce income for the State. Unless the State chooses to exchange these lands, any mineral use, development, and associated access requirements would not be compatible with wilderness values.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Pinto Mountains WSA (CDCA-335) is located in the BLM Dale Lake Geology-Energy-Minerals (G-E-M) Resource Area (GRA). BLM G-E-M data in the wilderness portion of the Desert Plan EIS (Volume B, Appendix III) indicated in 1980 that resource data for this WSA have not been fully analyzed, integrated, and interpreted, but that the WSA had potential for metals and uranium. About five unpatented mining claims were know to be recorded with BLM and in the WSA as of December 12, 1979.

   The GRA files in 1980, indicate that the eastern one-third of the WSA had moderate to high potential for the occurrence of gold, and moderate potential for the occurrence of limestone and uranium/thorium. Several past producing mines lie along the northern and eastern border outside the WSA. The western one third of the WSA had moderate potential for the occurrence of the rare earth elements, yttrium and cerium.

   The GRA files indicate that the high potential area for gold in the southeastern part of the WSA was based on favorable geology (metasedimentary rocks intruded by granitic rocks) extending west from an area of similar rocks. These rocks supported numerous past producers of gold from lode and placer deposits in the Dale Mining District to the east of the WSA. A large, northwest trending, moderate potential area for gold in the northern and eastern part of the WSA was based on the same favorable geology mentioned above, extending southwest into the WSA from numerous gold occurrences in the Humbug Mountain area to the northeast. The GRA file shows that the western part of the WSA (at Twentynine Palms Mountain) had moderate potential for the occurrence of yttrium and cerium based on geochemical anomalies and favorable geology (Precambrian Pinto Gneiss) extending eastward into the WSA. Occurrences of the yttrium mineral xenotime, and the cerium mineral, monazite are known from Twentynine Palms Mountain. The strongest rare earth mineral anomalies in Riverside County were known to occur in southern Music Valley (Evans,1964, Xenotime Mineralization in the Southern Music Valley Area, Riverside County, California, S.R. No. 79, California Division of Mines), bordering the western edge of the WSA. The moderate potential classification for the occurrence of limestone in the eastern part of the WSA was based on the occurrence of small limestone bodies with potential for small, local production. The moderate potential zone for uranium in the eastern portion of the WSA was based on the "PM" mining claims in association with uranium and four thorium gamma-ray anomalies detected in the late 1970's by the National Uranium Resource Evaluation airborne gamma-ray survey.

The area between Music Valley and the Dale Mining District (WSA 335) is still relatively unknown. Only small scale regional mapping (1:250,000) of the geology has been completed for this WSA by the California Division of Mines and Geology. Mapping, field examination, and sampling are required before the potential for metals, rare earths, and radioactive minerals can be assessed with greater certainty.

The north central portion of the WSA has moderate potential for the occurrence of dimension stone based on past production of several hundred tons prior to 1980 from the Marbolite mine. This mine is located one third of a mile north of the WSA boundary.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Recommendation: No. U.S. Geologic Survey or U.S. Bureau of Mines mineral survey was conducted for the Pinto Mountains WSA because the WSA is recommended nonsuitable for wilderness designation.

Unpatented mining claims located in the WSA are summarized in the following table taken from BLM records dated December 1987.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	N/A	8	8	N/A	160	160
Placer	N/A	0	0	N/A	0	0
Mill Site	N/A	0	0	N/A	0	0
Total	N/A	8	8	N/A	160	160

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Noise, surface disturbance and access requirements for mineral exploration and development will negatively impact naturalness, solitude, and primitive and unconfined types of recreation. Although the majority of the WSA has identified mineral values and the long term probability of development is good, impacts will be localized to specific areas of development.

2. Impact on Joshua Tree National Monument Wilderness: There will be no impacts on management or values in the adjacent wilderness. Although the wilderness would be enhanced by designation of the WSA, values in the designated wilderness have sufficient values that they stand on their own merit.

3. Impact on Minerals Exploration and Development: Opportunities for exploration and development of minerals will continue to be available subject to applicable laws, regulations and the moderate intensity multiple use management guidelines established in the CDCA Plan.

4. Impact on Vehicle Dependant Recreation: Opportunities for vehicle dependent recreation will continue to be available. New access necessary for mineral exploration and development will provide additional routes of travel.

5. Impact on Desert Bighorn Sheep and Desert Tortoise Habitat: There will be negligible impacts. The sheep range is transient habitat and only three square miles of the WSA contains tortoise habitat.

6. Impact on Cultural Resource Values: Any increase in the availability of access throughout the area because of mining, will result in long term adverse impacts to historic cultural resource sites.

F. Local Social and Economic Considerations

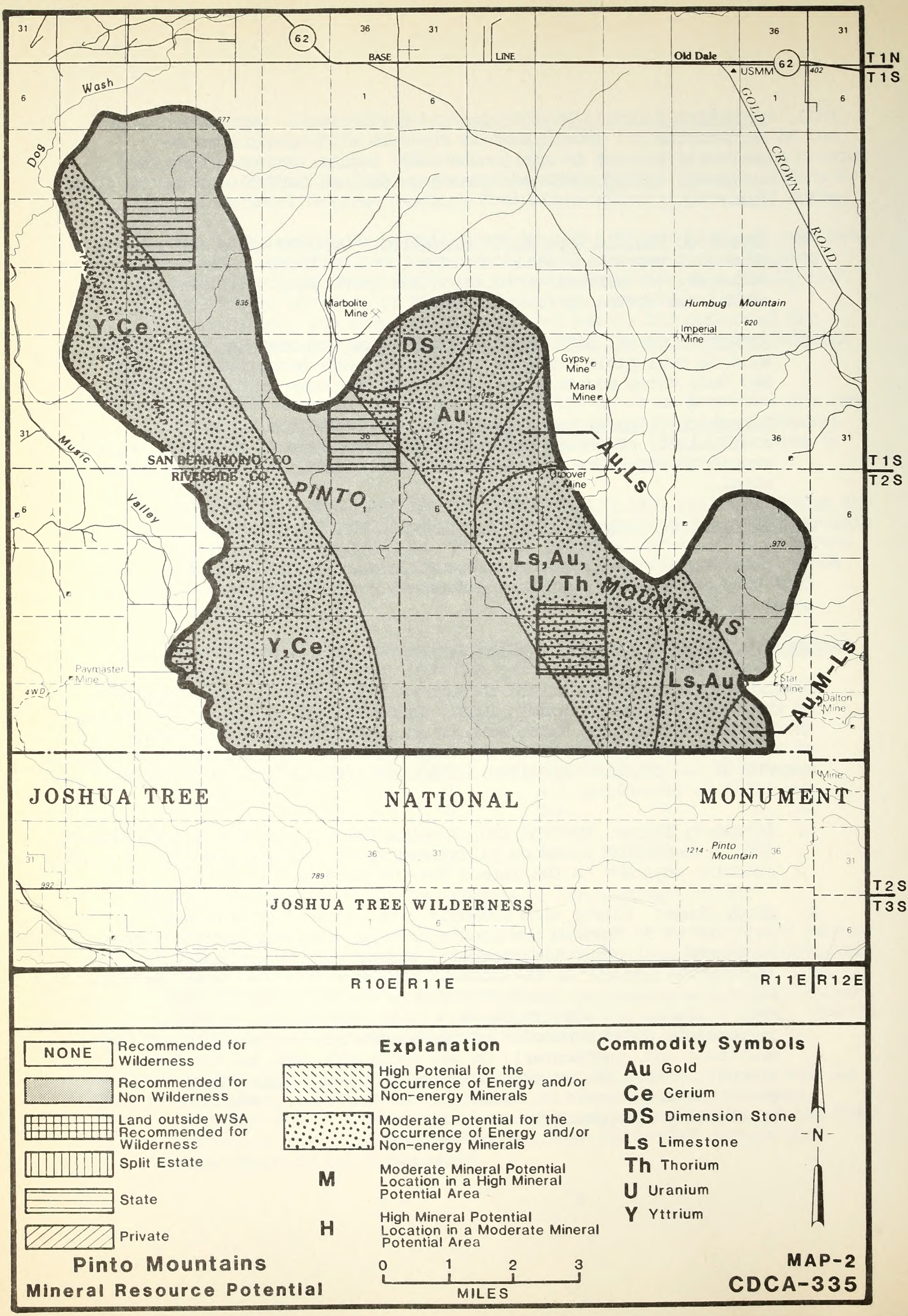
No local social or economic considerations were identified in the Final CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Inaccuracies that are known to exist are noted in parentheses.

1. Inventory Phase: Most of the comments favored the area's inclusion for further study based on wilderness value criteria and its location adjacent to the Joshua Tree Wilderness.

2. Study Phase: Thirty nine comments were received on this WSA. A majority of 23 favored the area's inclusion for further study and mentioned most often its potential for protecting and enlarging the adjacent wilderness in the JTNM. The comments stated that the area meets the wilderness criteria and provides solitude and ample opportunities for challenging primitive recreation. Several respondents urged expansion of the boundaries on the southwest and northeast and, particularly on the south edge next to the JTNM boundary. They stated that scars of old mining operations that are now inoperative could be reclaimed and that many roads have already practically disappeared.



62
BASE
LINE
Old Dale
USMM
GOLD CROWN ROAD
T1N
T1S
T2S
T3S
Wash
Dog
Music
Valley
Marbolite Mine
Humbug Mountain
Imperial Mine
Gypsy Mine
Maria Mine
Groover Mine
Paymaster Mine
4WD
Star Mine
Dalton Mine
Mine
SAN BERNARDINO CO
RIVERSIDE CO
PINTO MOUNTAINS
Y,Ce
DS
Au
Au,Ls
Ls,Au, U/Th
Ls,Au
Au,M-Ls
JOSHUA TREE NATIONAL MONUMENT
Pinto Mountain
JOSHUA TREE WILDERNESS
R10E
R11E
R11E
R12E
N
0
1
2
3
MILES

NONE Recommended for Wilderness

Recommended for Non Wilderness

Land outside WSA Recommended for Wilderness

Split Estate

State

Private

Explanation

High Potenial for the Occurrence of Energy and/or Non-energy Minerals

Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals

M Moderate Mineral Potential Location in a High Mineral Potential Area

H High Mineral Potential Location in a Moderate Mineral Potential Area

Commodity Symbols

Au	Gold
Ce	Cerium
DS	Dimension Stone
Ls	Limestone
Th	Thorium
U	Uranium
Y	Yttrium

Pinto Mountains

Mineral Resource Potential

MAP-2

CDCA-335

Most of the 16 respondents who opposed further study for this WSA pointed out the scars of extensive mining activity. Also noted were the roads to many mines, the sights and sounds of vehicles on nearby roads, and the interference caused by lights from the city of Twentynine Palms. Some stated that the flat land with its many scars provided little chance for a wilderness experience. They felt that the best use for the area would be family recreation requiring vehicle access. They noted that formerly the area had been a special design area under the Interim Critical Management Policy and was open to this activity, along with other family recreation such as camping, hunting, prospecting, photography, hiking, and rockhounding. With the Joshua Tree Wilderness so close, there was no need for this area to be wilderness. One miner state that gold deposits can be found in the area.

Three comments were received in response to the Public Input Workbook (3/15/79). One favored wilderness for this WSA. The others opposed further study, the first because of the presence of heavily mined areas and the needs of off-highway vehicle users, and the other because of the presence of thorium and rare earths in the region.

3. Draft Plan Alternatives: Few comments specific to this WSA were received in response to the Draft Plan Alternatives. However, this WSA was one a large number which were opposed by the National Outdoor Coalition, a coalition of mining, rock collecting, and off-highway vehicle groups. The organization requested that he subject area be classified "medium use," which was in agreement with the recommendation of both the No ACtion and Use Alternatives. A large number of club members sent in printed coupons and letters supporting this position. Conservation oriented individuals and organizations recommended wilderness designation for this WSA, as did the Protection Alternative.

4. Proposed Plan: There were few comments on this particular WSA in response to the Proposed Plan, which recommended for this area a classification of "medium use." The organizations represented by the National Outdoor Coalition were in agreement with this recommendation. Conservation groups disagreed and made a general request for more wilderness.

No comments were received from local governments.

Santa Rosa Mountains

CDCA 341

SANTA ROSA MOUNTAINS WILDERNESS STUDY AREA (WSA)

(CDCA-341)

1. THE STUDY AREA --- 69,642 acres

The Santa Rosa Mountains WSA is located in south central Riverside County in the central portion of the California Desert Conservation Area (CDCA). Palm Desert, located seven miles north, is the closest community. The WSA includes 47,417 of public land under the jurisdiction of the Bureau of Land Management (BLM), 1,495 acres of State land, and 20,730 acres of private inholdings (see Map 1 and Table 1).

Because of the checkerboard land ownership pattern, the WSA boundary is extremely ragged and the study area's shape irregular. Its western boundary joins the Santa Rosa Wilderness Area, a U.S. Forest Service wilderness area located within the San Bernardino National Forest. The southern boundary, formed by the Riverside/Imperial county line, coincides with a State designated wilderness area in Anza Borrego State Park. The remaining boundaries to the east and north follow section lines and were established to avoid agriculture, private land and disturbed public lands. Section 10, Township 8S, Range 5E is within the WSA boundaries. It was patented to the State of California in 1983 for State Parks Wilderness under the Recreation and Public Purposes Act.

The terrain is rugged with the elevations rising dramatically from just above sea level to around 7000 feet in a relatively short distance. The WSA is laced with deep washes and shallow drainages and supports numerous riparian springs and streams which flow year round. Here, desert and mountain environments blend together to form a complex overlapping of vegetative patterns. Numerous life zones are represented as the elevation changes and each reflects a unique plant environment. Abundant water sources found throughout the area create riparian oases where plants and animals are found in great abundance and diversity.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statement (EIS) for the CDCA Plan: protection, use, balanced, and no action; a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

69,316 acres recommended for wilderness
276 BLM acres recommended for nonwilderness

Partial wilderness (99% suitable) is the recommendation for this WSA. The 276 acres in this WSA recommended nonsuitable are released for uses other than wilderness. In addition to the Federal acreage recommended for wilderness, BLM recommends that 11,153 acres of private land be acquired through exchange or purchase and designated as wilderness. Additional State lands totalling approximately 11,023 acres, managed by the State for wildlife preservation, will be recommended for wilderness but are not recommended for acquisition. With acquisition of these inholdings, a total of 69,316 acres are recommended for wilderness. Appendix 1 lists all inholdings and provides additional information on their acquisition. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

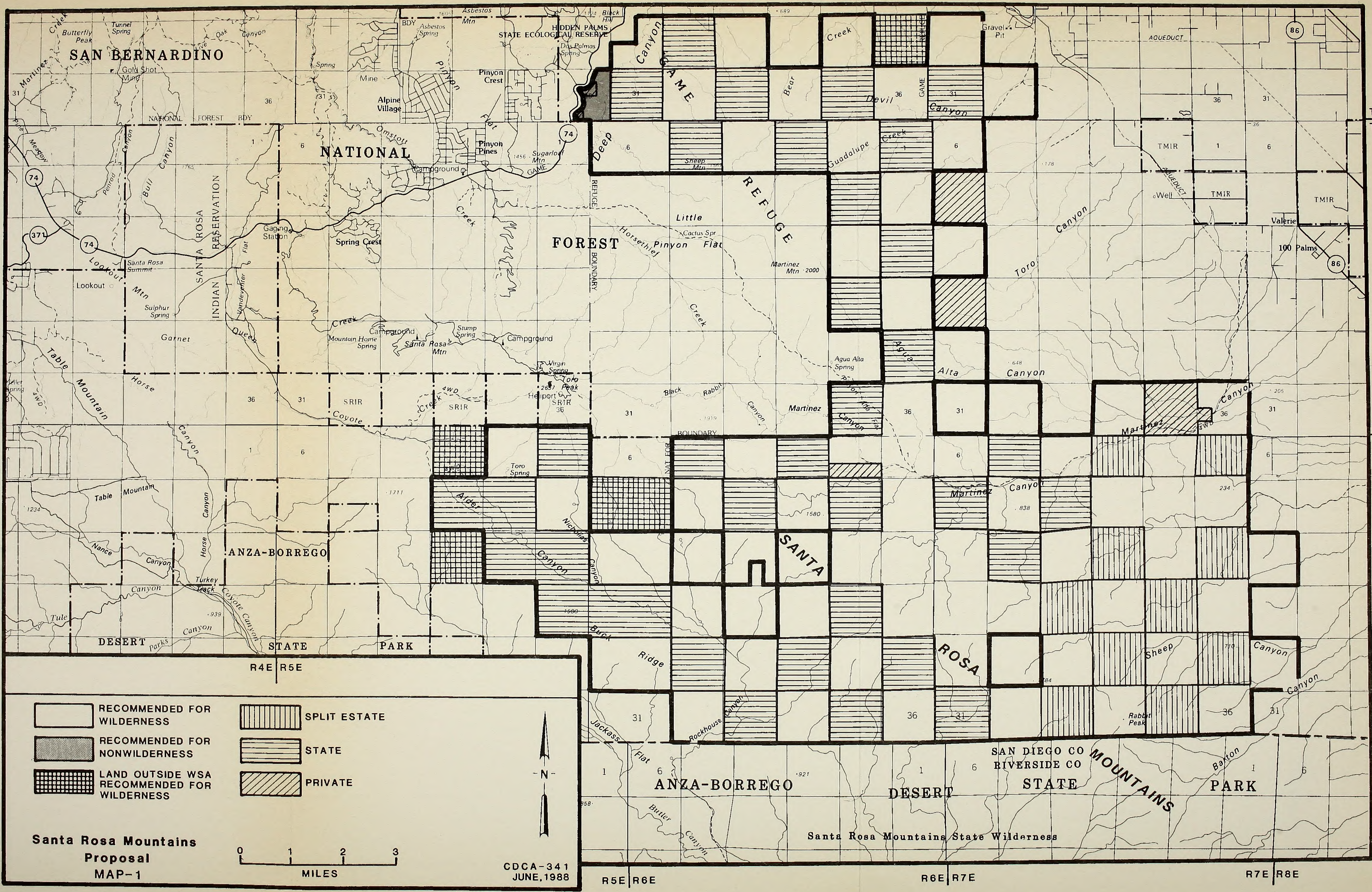
The suitable portion of the Santa Rosa Mountains WSA is recommended for wilderness designation because: (1) in all measured values, it exceeds the criteria specified in Section 2(c) of the Wilderness Act of 1964; (2) the area is replete with special features; and (3) few conflicts exist with other resources. These boulder strewn mountains, where steep walled canyons are eroded by perpetual springs and streams that feed hidden palm oases, are the essence of a wilderness experience. The remoteness and primeval character of this desert-mountain area enhances the area's wilderness values. As the southern backdrop of the rapidly growing Coachella Valley, this rugged range provides an important seasonal recreational outlet to both residents and visitors to the area. Because wilderness values are so significant, the suitability recommendation will preclude any further vehicular use of approximately nine miles of primitive routes of travel.

The WSA boundaries encompass a truly unique environment that includes unequalled natural beauty, diverse populations of wildlife and vegetation, and a variety of habitats that range from Creosote Bush scrub to palm oasis woodland and finally to mixed conifer forest. A multitude of wildlife and vegetation, traces of ancient Native American cultures and unlimited panoramic ridge top vistas are found in abundance. The area is enhanced by the fact that it joins designated wilderness in the San Bernardino National Forest along its western border and designated California State Wilderness in Anza Borrego Desert State Park to the south.

Within the California Desert Conservation Area, the Santa Rosa Mountains WSA was determined to have some of the best wilderness values of all study areas. This high rating is reflected in other recognitions that the area has received. The Santa Rosa Mountains have been recommended for inclusion into the Man in the Biosphere Reserve. This area is also an integral part of the Santa Rosa Mountains Wildlife Habitat Management Area, a Sikes Act project. This area is managed to support the largest population of Peninsular bighorn sheep (Ovis canadensis cremnobates) remaining in the United States.

Within this WSA, wilderness values are in conflict with mineral resource values. However, no development of these mineral resources has yet occurred and there are no mining claims on record with BLM. In the southern portion of the WSA, areas having high potential for the occurrence of tungsten and limestone and moderate potential for the occurrence of gold are located. Also, within the WSA boundaries are two areas having moderate potential for the occurrence of geothermal resources.

Only 276 acres of public land within the study area boundary are not recommended for wilderness designation. Located in the extreme northwest corner of the WSA, this small parcel abuts Highway 74, known as Palms to Pines Highway. As the only through route across the Santa Rosa Mountains, this highway receives considerable traffic. The sights and sounds of the passing vehicles greatly diminishes the feeling of solitude, detracting from the wilderness experience to be had at this parcel. Manageability of this portion of the WSA is also a factor in the nonsuitable determination. At this corner, the WSA boundary follows section lines, private land boundaries and the highway. Manageability is constrained by this confusing boundary. The area will serve as an effective buffer for the designated wilderness by reducing the existing noise and visual impacts of the highway.


RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0 1 2 3
MILES
SAN BERNARDINO
NATIONAL FOREST
SANTA ROSA INDIAN RESERVATION
GAME REFUGE
SANTA ROSA MOUNTAINS
ANZA-BORREGO DESERT STATE PARK
HIDDEN PALMS STATE ECOLOGICAL RESERVE
SAN DIEGO CO
RIVERSIDE CO
Santa Rosa Mountains State Wilderness
Pinyon Crest
Alpine Village
Pinyon Pines
Santa Rosa Mtn
Toro Peak
Martinez Mtn 2000
100 Palms
Valerie
TMIR
SRIR
74
86
371
T6S
T7S
T8S
T9S
R4E R5E
R5E R6E
R6E R7E
R7E R8E

Santa Rosa Mountains Proposal
MAP-1

CDCA-341
JUNE,1988

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	47,417
Split Estate	(BLM surface only)	0
Inholdings		
State		1,495
Private		20,730
Total		69,642
Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	47,140
BLM	(outside WSA)	0
Split Estate	(within WSA)[1]	0
Split Estate	(outside WSA)[1]	0
Total BLM Land Recommended for Wilderness		47,140
Inholdings[1]		
State		
Private		11,153
Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	276
Split Estate	(BLM surface only)	0
Total BLM Lands Not Recommended for Wilderness		276

---

[1] Appendix 1 is a detailed description of inholdings and split estate tracts included within the study. For purposes of this report, split estate lands are defined only as those lands with Federal surface and non Federal subsurface (minerals). Lands that have Federal minerals but non Federal surface should be classified in this report by the owner of the surface estate.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The Santa Rosa Mountains WSA has generally retained its primeval character and influence and man's imprint is substantially unnoticeable. The rugged terrain has historically limited access into the area. Except on foot or horseback, deep penetration of the area is virtually impossible. With the exception of Indian village ruins, Indian artifacts, one abandoned stone cabin and a few scattered wildlife drinkers, the area is truly pristine. Even ways, so numerous in most of the desert study areas are scarce. Vegetation has remained untouched and the abundance of wildlife attest to the fact that humans have been, and are still, only brief visitors to the area.

2. Solitude: The screening effect of the natural barriers combine to provide truly outstanding opportunities for solitude. In spite of the WSA's relative closeness to the Coachella Valley, it is buffered from its activity by miles of open space. Designated wilderness protects the western and southern borders from intrusion. The eastern boundary is isolated by rugged foothills and agriculture. The only immediate threat to solitude is from Highway 74 in the north which passes close to the boundary. However, this threat is mitigated by the small area recommended as nonsuitable, and more importantly, the extreme ruggedness of the terrain which tends to discourage all but the most determined hikers.

   Internally, the sense of loneliness and isolation is reinforced by rugged, varied terrain and areas of dense vegetation which form barriers that separate users and divide the study area into relatively remote parcels. The views of the surrounding mountains and valleys provide a sense of spaciousness while the canyons ensure opportunities for intimacy and a sense of isolation. The diversity of both the topography and vegetation ensure opportunities for a variety of adventures and exciting wilderness experiences for all users.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: The Santa Rosa Mountains and foothills support steep walled canyons, isolated valleys, hidden palm oases, aboriginal trails and numerous panoramic ridge top vistas. They provide an outstanding backdrop for recreationists seeking primitive and unconfined types of recreation. There are few man made features within the study area and these have no impact on primitive recreation. The sense of complete freedom and lack of

confinement is enhanced by the designated wilderness and natural areas in the adjoining Anza Borrego Desert State Park and San Bernardino National Forest.

Current primitive recreational activities in the Santa Rosa Mountains WSA includes backpacking, and horseback riding, day hiking, nature study and hunting. The Boo Hoff equestrian trail loops through a corner of the WSA. This is one of the few trails in the WSA, constructed and maintained by a local equestrian club. The Cactus Spring Trail which is an ancient aboriginal pathway, links the Santa Rosa plateau with the desert floor in the Coachella Valley. To the west, this trail connects the WSA with designated wilderness areas in the San Bernardino National Forest.

Other popular destinations for hikers are Bear Creek Oasis, Lost Canyon Oasis, Guadelupe Canyon and Devil Canyon. These areas, located in the northeast, are favored by day hikers and horseback riders. Rockhouse Canyon and valley, in the extreme south, offer glimpses into the area's past. Remnants of early Native American and European settlers can still be found. Access by foot or on horseback is relatively easy from Anza Borrego State Park. Rabbit Peak, located near the southeastern boundary of the WSA is a notable desert peak. The ascent to the 6623 feet summit is recognized as one of the most challenging and rewarding climbs of any of the desert mountain peaks located in Southern California. Local Sierra Club chapters lead organized day and overnight trips to the summit of this mountain.

Opportunities for nature study and photography are rated high in the WSA. The area displays a diverse mixture of topography and vegetation which ranges from the desert floor to mountain peaks. Numerous life zones are represented and each reflects the unique plant life identified with the zone. Universities and local colleges utilize the Santa Rosa Mountains frequently as a living laboratory for scientific and informal studies and outings.

Hunting is restricted to the southern half of the WSA since the northern portion is located within a State Wildlife Refuge. Deer, quail and dove are hunted in season.

4. Special Features: The Santa Rosa Mountains abound with areas of known cultural resources and/or sensitivity. Many locations containing sherd scatters, primitive trails, rock cairns, roasting pits, milling stations, rock alignments, rock shelters and outstanding examples of rock art have been documented. Remnants of entire villages and temporary camps still remain. Native Americans have identified areas that are currently used for temporary habitation, resource collection and ritual hunting.

The mountains are well known for their Peninsular bighorn sheep. This subspecies (Ovis canadensis cremnobates) is listed by the State of California as threatened. It is limited to the Peninsular Ranges of Southern California and Northern Baja California, Mexico. With an estimated number of 350 animals, the Santa Rosa Mountains support the largest herd in the United States. The herd utilizes the entire range between the 1000 feet and 4000 feet levels. Bear Creek, Deep Canyon and Martinez Canyon are extremely important as summer concentration areas and along with one existing guzzler, provide the water and rugged escape terrain necessary for lambing. Mule deer (Odocoileus hemionus) are abundant throughout the coniferous forests at the higher elevations and can be found throughout the area above the 3500 feet level. Mountain lion (Felis concolor), bobcat (Lynx rufus), grey fox (Urocyon cinereoargenteus), coyote (Canis latrans) and ringtail (Bassariscus astutus) round out the diverse animal population in the WSA.

Avian predators include the great horned owl, prairie falcon, and golden eagle, all of which nest and forage throughout the area.

The reptilian fauna found in the WSA is as varied. The elevation span and undisturbed nature of the area provides broad representation of the species characteristic of the lower Sonoran life zones. Frogs, toads and a relic salamander, the desert slender salamander, which will undoubtedly be added to the Federal and State species list, complete the cast.

Scenic quality throughout the area is high overall and during the scenic quality evaluation was rated extremely high in the categories of landform, color and vegetation.

B. Diversity in the National Wilderness Preservation System (NWPS)

1. Assessing the diversity of natural systems and features as represented by ecosystems: The WSA contains 23,221 acres of the California Chaparral/Juniper-pinyon woodland (Juniperus-Pinus) and 24,196 acres of the American Desert/Creosote Bush-Bur Sage (Larrea-Franseria) ecosystem. Adjacent to two designated wilderness areas, the Santa Rosas provide the missing piece which links the two distant environments together. It ties the heavily vegetated mountains of the San Bernardino National Forest to the dry, barren sands of Anza Borrego State Park. Its transition from desert to mountain completes an environmental sequence that includes landform, wildlife and vegetation. Few, if any, such unique environments can be found within the NWPS.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas areas	NWPS Areas acres	Other BLM Studies areas	Other BLM Studies acres
	NATIONWIDE			
American Desert/Creosote Bush-Bur Sage	3	126,033	48	1,547,244
California Chapparal/Juniper-Pinyon Woodland	1	42,971	1	13,736
	CALIFORNIA			
American Desert/Creosote Bush-Bur Sage	2	26,427	20	952,783
California Chapparal/Juniper-Pinyon Woodland	1	42,971	1	13,736

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of nine major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a five-hour drive of the population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas areas	NWPS areas acres	Other BLM Studies areas	Other BLM Studies acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Bakersfield	32	4,071,358	128	3,998,548
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Oxnard-Ventura	23	2,195,198	85	2,703,260
Riverside-San Bernardino	22	2,031,054	205	7,658,649
Santa Barbara-Santa Maria-Lompoc	20	1,166,142	35	528,590
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The WSA is within 50 air miles of eleven BLM WSAs recommended for wilderness designation. The WSA is adjacent to the Santa Rosa Wilderness Area, administered by San Bernardino National Forest and Anza Borrego Desert State Wilderness. Also within a 50 mile radius are the following designated wilderness areas: San Jacinto and San Gorgonio Wilderness Areas, administered by San Bernardino National Forest; Pine Creek and Agua Tibia Wilderness Areas, administered by Cleveland National Forest; Joshua Tree Wilderness Areas, administered by Joshua Tree National Monument; and Cuyamaca Mountains and Mount San Jacinto State Wilderness Areas.

C. Manageability

The Santa Rosa Mountains WSA is manageable as wilderness. Although much of the area reflects a checkerboard land ownership pattern, projected private land uses are compatible with wilderness management. The majority of private land in the WSA is owned by the State of California and managed by the California Department of Fish and Game as a wildlife refuge. Since their goal is to maintain the habitat in as pristine a condition as possible, there should be no conflict with wilderness values. On the remaining private lands within the WSA's borders, little development could take place, and, what could, by the nature of the rugged terrain, would be isolated. BLM has determined that the land ownership pattern, which under most circumstances would preclude wilderness designation, in this case, has virtually no impact on the manageability of the area.

Once designated wilderness, an administrative determination will be made to provide for maintenance of the bighorn guzzler.

Adjoining designated wilderness on the west and south enhances the manageability not only of the Santa Rosa Mountains WSA but also of the two existing wilderness areas. Signing will be required along these borders, however, since each administrating agency has their own set of rules and regulations concerning wilderness use. The extremely rugged terrain along the eastern and northern boundaries virtually preclude penetration except in a few isolated canyons.

The single location where manageability is constrained is the parcel in the extreme northwest corner recommended nonsuitable. The manageability concerns involve an irregular boundary following section lines, private land boundaries and Highway 74. Because positive on the ground identification of this boundary is difficult as is delineation by signing, inadvertent encroachments may occur, degrading the parcels naturalness and invading solitude.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Santa Rosa WSA (CDCA 341) is located in the BLM Santa Rosa Mountains Geology-Energy-Mineral (G-E-M) Resource Area (GRA). The G-E-M section of the wilderness portion of the CDCA Plan EIS (Volume B, Appendix III) stated that mineral resource data had not been fully analyzed, integrated, or interpreted during the 1980 recommendation process. However, the 1980 EIS did state that the WSA had possible potential for metallic resources based on geochemical data, but the data were insufficient to evaluate the potential for other mineral resources. The G-E-M data in the EIS did not indicate the number of mining claims within the WSA as of December 12, 1979.

   In 1980 when the suitability recommendation was made, little data was available in the GRA file concerning this WSA. The 1980 GRA did contain some evidence that indicated there was potential for metallic minerals, limestone, and geothermal resources; however the exact extent of this mineralization was not known nor classified.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should Be Considered in the Final Recommendation: The U.S. Geological Survey (USGS) and U.S. Bureau of Mines (BOM) conducted a mineral survey for the suitable portion of the WSA. In July 1987 a draft of the USGS Report for the WSA was obtained by BLM. This report identifies several areas in the WSA with moderate or high potential for gold, tungsten, and limestone.

   The USGS/BOM report identified several areas in the recommended suitable southern portion of the WSA possessing high and/or moderate potential for mineral occurrence. In one area, replacement deposits, found along contacts between granitic intrusive rocks and Paleozoic carbonate rocks, have a high potential for the occurrence of tungsten and construction quality limestone. These deposits were also found to contain anomalous concentrations of beryllium, bismuth, copper, molybdenum, tin, and zinc. At a second site, quartz veins, cutting through quartz monzonite, gneiss, schist, and mylonite rocks, were classified as having a moderate potential for the occurrence of gold (see Map 2).

   The California Division of Mines and Geology (CDMG) mapped a large shear zone (Rogers, T., 1965, Geologic map of California: Santa Ana sheet, Olaf P. Jenkins, edition) as trending northwesterly and ending at the point that reaches the western boundary of the WSA. All of the mineralized areas lie in the southern portion of the WSA and are largely associated with this shear zone and its associated faults.

The USGS/BOM report extends the faults of this shear zone into and across the WSA to an area with known hot springs at the east boundary of the WSA. Generally, the east boundary of the WSA is also the west boundary of the Coachella Valley area classified by BLM (1982) as prospectively valuable for geothermal resources. The USGS report stated that no evidence of hot springs or other geothermal indicators were noted in the WSA. However, the recommended suitable south portion of the WSA is classified under the BLM classification system as having a moderate potential for the occurrence of geothermal resources (see Map 2). This classification is based on the connection between the shear zone, an area with known hot springs, and the portion of the WSA mapped by CDMG as having favorable geologic conditions for geothermal resources (Majmundar, H., 1983, Technical Map of Geothermal Resources of California, Technical Map No. 5).

Alder Canyon, in the recommended suitable west portion of the WSA, has been assigned a moderate potential for geothermal resources by the BLM. This canyon contains the Buck Ridge Fault which is a branch fault of the San Jacinto fault zone, an area classified by CDMG as favorable for the occurrence of geothermal resources.

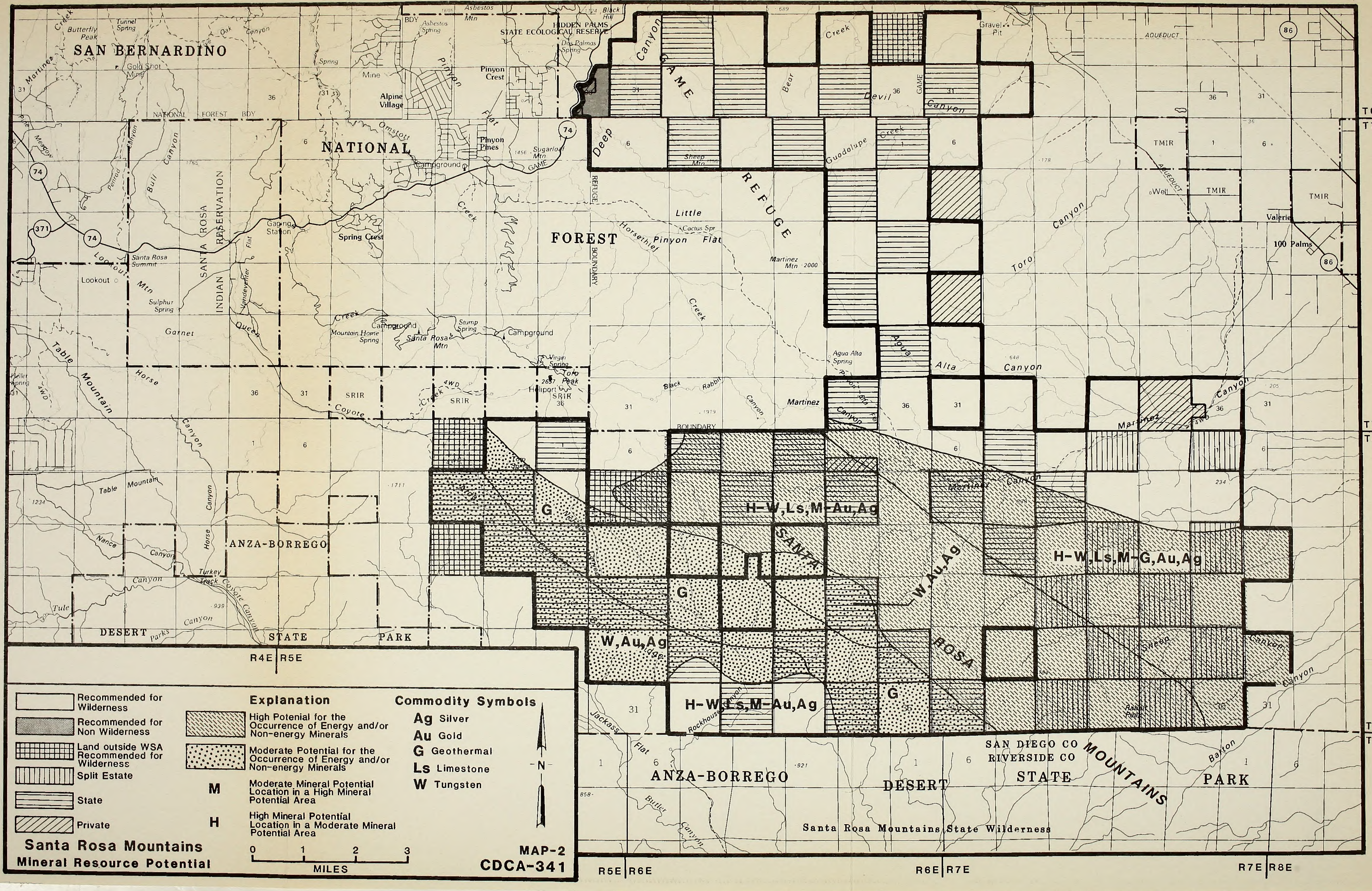
Sand and gravel resources occur in Alder Canyon. To date no production or interest has been expressed in developing these resources. As of December, 1987, no unpatented mining claims were recorded with BLM in this WSA.

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Throughout the suitable area, wilderness values will be maintained. Minor beneficial impacts to naturalness will occur because of the restrictions placed on fire suppression activities. In the small nonsuitable area, rugged terrain precluding entry will protect existing wilderness values. Should any development of private inholdings occur before Federal acquisition, wilderness values will be adversely impacted.

   Based on the current lack of interest in mineral development, impact on wilderness values from any development on areas of mineral potential are considered very low.

2. Impact on Bighorn Sheep/Habitat: Habitat throughout the area will remain in its present condition. Placement and maintenance of improvements such as water guzzlers, and herd management will be constrained by wilderness designation because of the restrictions placed on motorized vehicles, specifically helicopters, and mechanized equipment. Guzzler maintenance will be provided for through administrative designation.


SAN BERNARDINO
NATIONAL
FOREST
GAME REFUGE
SANTA ROSA INDIAN RESERVATION
ANZA-BORREGO DESERT STATE PARK
SANTA ROSA MOUNTAINS
SAN DIEGO CO
RIVERSIDE CO
Santa Rosa Mountains State Wilderness
HIDDEN PALMS STATE ECOLOGICAL RESERVE
TMIR
SRIR
H-W,Ls,M-Au,Ag
H-W,Ls,M-G,Au,Ag
W,Au,Ag
G
T6S
T7S
T8S
T9S
R4E R5E
R5E R6E
R6E R7E
R7E R8E
74
371
86
Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
Ag Silver
Au Gold
G Geothermal
Ls Limestone
W Tungsten
N
0 1 2 3
MILES

Santa Rosa Mountains
Mineral Resource Potential

MAP-2
CDCA-341

3. Impact on Desert Slender Salamander/Habitat: Habitat within the WSA will remain in its present condition. Study and inventory of this elusive species may be constrained by wilderness designation because of restrictions placed on the use of mechanized equipment.

4. Impact on Cultural Resources: Designation will have little impact on the preservation of cultural resources in the WSA. Existing Federal laws and BLM management guidelines, as well as rugged, inaccessible terrain, already provide adequate protection for these special values.

5. Impact on Native American Values: The proposed action will result in slight beneficial impacts by preserving the traditional collection areas and ritual sites in their present state for generations to come.

6. Impact on Mineral Exploration and Development: Unless claims are filed before designation, opportunities for mineral development on 99% of the WSA will be eliminated by wilderness designation.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Inaccuracies that are known to exist are noted in parentheses.

1. Inventory Phase: Public comments stated overwhelmingly that this area is one of the most pristine and potentially spectacular wilderness areas in the desert. These comments will be evaluated in the study phase to determine if an enlarged area should be considered.

2. Study Phase: Of the 71 comments received on this WSA, all but 11 supported wilderness designation. Many respondents stated that this is one of the most outstanding wilderness candidates in the California Desert. The two reasons given most frequently for supporting wilderness were the contiguity of WSA 341 with USFS RARE II lands (Cactus Springs) and the presence of the rare Peninsular bighorn sheep.

   Other features mentioned by wilderness proponents as needing the protection of wilderness status were: the desert slender salamander; at least three rare plants - Santa Rosa sage, redshank chamise, and agave; fossil mammals; and archaeological values. The area provides an example of a mountain-to-desert transition area and excellent opportunities for education and research. Proximity to urban areas was considered to be a positive feature, since it provides unusual "escape terrain." Specific areas within the WSA which were noted were Cactus Springs trail, Toro Peak, Martinez Peak, Coyote Canyon, Mexican Hat, and Horsethief Creek. A few letters mentioned the lack of vehicle access and the damage which vehicles could have in this special area. The contiguity of the WSA with Fish and Game wildlife lands and with Anza Borrego Desert State Park were additional reasons for designating this area as wilderness.

Extensive non-public land ownership within the WSA was addressed both by proponents and opponents of wilderness status. Proponents noted the willingness of the Nature Conservancy and the California Department of Fish and Game to submit their holdings for wilderness designation. They also suggested that school districts would benefit from a trade of their lands here for high revenue producing lands elsewhere. Opponents of wilderness said this checkerboard area did not contain 5,000 acres of contiguous land and, therefore, did not meet the wilderness requirements. The cost of acquiring private lands would be prohibitive to overburdened taxpayers.

Those who objected to wilderness designation gave the following reasons. The area's plant life is typical, not unique. The western and southern portions of the WSA should be eliminated from further study since the communications facilities on Toro Peak (outside the WSA) degrade scenic quality. Opportunities for vehicle access are few and must be continued so that people can enjoy the wilderness. Environmental impacts of such access would be minimal and would be obliterated by weather. Mineral resource development is a primary concern, and provisions should be made to allow meaningful development on private lands withdrawn from multiple use. Geothermal potential exists within the area. The Army Corps of Engineers noted that WSA 341 may affect dam and debris basin sites under consideration in the Indian Wells-Dead Indian Creek-Deep Canyon areas.

Thirty-nine comments were received in response to the Public Input Workbook (3/15/79). The vast majority encouraged wilderness classification to protect the fragile ecosystem and requested expansion of the boundaries and acquisition of private lands. A few of those who commented were opposed to wilderness because of the great amount of private land in the WSA and the lack of access for motorized vehicles. The University of California wanted to acquire land in the northern portion of the WSA to add to its Deep Canyon Desert Research Center.

3. Draft Plan Alternatives: Both the conservation oriented public, as represented by the Sierra Club and the Audubon Society, and the multiple use proponents, as represented by the National Outdoor Coalition (NOC), supported a wilderness recommendation for this WSA. No new arguments were presented. The Coachella Valley Water District opposed any actions which would hinder construction of projects which would protect the valley from periodic floods from mountain canyons.

4. Proposed Plan: General input was similar to that for the Draft Plan. The Coachella Valley Association of Governments favored wilderness for this area. Several of those who commented, including the California Department of Fish and Game, recommended acquisition of the checkerboard private lands as early as possible for protection of the Bighorn Sheep.

APPENDIX 1
ESTIMATED COSTS OF ACQUISITION OF NON-FEDERAL HOLDINGS WITHIN AREAS RECOMMENDED FOR DESIGNATION
SANTA ROSA MOUNTAINS WSA (CDCA-341)

	LEGAL DESCRIPTION						TYPE OF OWNERSHIP BY ESTATE				ESTIMATED COST OF ACQUISITION	
PARCEL No.	TWNSHP	RNG	SEC	MERIDIAN	TOTAL ACREAGE	NUMBER OF OWNERS	SURFACE ESTATE	SUBSURFACE ESTATE	PRESENTLY PROPOSED FOR ACQUISITION	PREFERRED METHOD OF ACQUISITION	LAND COSTS ($1000)	PROCESSING COSTS ($1000)
1	6S.	6E.	25	SBM	160	1	PRIVATE	PRIVATE	YES	PURCHASE	16.0	2.5
2	6S.	6E.	25	SBM	160	1	PRIVATE	PRIVATE	YES	PURCHASE	16.0	2.5
3	6S.	6E.	25	SBM	160	1	PRIVATE	PRIVATE	YES	PURCHASE	16.0	2.5
4	6S.	6E.	25	SBM	176	1	PRIVATE	PRIVATE	YES	PURCHASE	17.6	2.5
5	7S.	7E.	7	SBM	*(648)	16	PRIVATE	PRIVATE	YES	PURCHASE	648.0	40.0
6	7S.	7E.	19	SBM	*(650)	20	PRIVATE	PRIVATE	YES	PURCHASE	650.0	50.0
7	7S.	7E.	35	SBM	640	1	PRIVATE	PRIVATE	YES	PURCHASE	640.0	2.5
8	8S.	5E.	3	SBM	320	1	PRIVATE	PRIVATE	YES	PURCHASE	320.0	2.5
9	8S.	5E.	3	SBM	320	1	PRIVATE	PRIVATE	YES	PURCHASE	320.0	2.5
10	8S.	5E.	15	SBM	160	1	PRIVATE	PRIVATE	YES	PURCHASE	160.0	2.5
11	8S.	5E.	15	SBM	160	1	PRIVATE	PRIVATE	YES	PURCHASE	160.0	2.5
12	8S.	5E.	15	SBM	160	1	PRIVATE	PRIVATE	YES	PURCHASE	160.0	2.5
13	8S.	5E.	15	SBM	160	1	PRIVATE	PRIVATE	YES	PURCHASE	160.0	2.5
14	8S.	6E.	2	SBM	160	1	PRIVATE	PRIVATE	YES	PURCHASE	160.0	2.5
15	8S.	6E.	7	SBM	987	1	PRIVATE	PRIVATE	YES	PURCHASE	987.0	2.5
16	8S.	7E.	1	SBM	492	1	FEDERAL	PRIVATE	YES	PURCHASE	12.3	0.85
17	8S.	7E.	3	SBM	492	1	FEDERAL	PRIVATE	YES	PURCHASE	12.3	0.85
18	8S.	7E.	13	SBM	640	1	FEDERAL	PRIVATE	YES	PURCHASE	16.0	0.85
19	8S.	7E.	15	SBM	640	1	FEDERAL	PRIVATE	YES	PURCHASE	16.0	0.85
20	8S.	7E.	21	SBM	640	1	FEDERAL	PRIVATE	YES	PURCHASE	16.0	0.85
21	8S.	7E.	23	SBM	640	1	FEDERAL	PRIVATE	YES	PURCHASE	16.0	0.85
22	8S.	7E.	25	SBM	640	1	FEDERAL	PRIVATE	YES	PURCHASE	16.0	0.85
23	8S.	7E.	27	SBM	640	1	FEDERAL	PRIVATE	YES	PURCHASE	16.0	0.85
24	8S.	7E.	33	SBM	660	1	FEDERAL	PRIVATE	YES	PURCHASE	16.5	0.85
25	8S.	7E.	35	SBM	648	1	FEDERAL	PRIVATE	YES	PURCHASE	16.2	0.85

* Indicates that exact parcel acreage is unknown. Total acreage for all parcels in a particular section are shown in ( ).

These figures were derived from Bureau Land Records and provide for more detail than GIS estimates and therefore may differ from acreage summaries in Table 1.

Mecca Hills

CDCA 343

MECCA HILLS WILDERNESS STUDY AREA (WSA)

(CDCA-343)

1. THE STUDY AREA --- 21,542 acres

The Mecca Hills WSA is located in central Riverside County, in the southern portion of the California Desert Conservation Area (CDCA), approximately 15 miles southeast of Indio. The WSA includes 18,175 acres of public land under the jurisdiction of the Bureau of Land Management (BLM) and private inholdings totalling 3,367 acres (see Map 1 and Table 1).

To the south, the WSA is bounded by the Coachella Canal to the cherrystemmed Painted Canyon Road. From that point, the boundary continues east, excluding private land until it intersects with Box Canyon Road, State Highway 195. Box Canyon Road forms the eastern boundary. The northeastern boundary is formed by topography of the badlands. Finally, the boundary on the northwest is formed by topography and an unnamed wash.

This WSA contains the extremely colorful, deeply eroded, and sparsely vegetated Mecca Hills. Small, narrow, steep walled canyons wind throughout this area, creating a natural maze within this badlands labyrinth. Sandy washes dissect the area and contain stands of ironwood, smoke tree, and palo verde, while scattered stands of ocotillo grow on the gentler slopes. Some portions of the Mecca Hills show evidence of the presence of the San Andreas Fault which has uplifted in areas, adding to the erosion and creating uniquely faulted and folded geologic formations. Within this area, the elevation varies from sea level to 1,800 feet.

Because of the area's outstanding recreational opportunities, the Mecca Hills Recreation Area was designated in May, 1972 (43 CFR Subpart 2070) and has subsequently been managed with emphasis on recreation. The recreation area unit covers the entire WSA as well as surrounding public lands.

This WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EIS) for the CDCA Plan: protection, use, balanced and no action alternative, and a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

7,860	acres recommended for wilderness
10,976	BLM acres recommended for nonwilderness

Partial wilderness (36% suitable) is the recommendation for this WSA. The remaining 10,976 acres in this WSA recommended nonsuitable are released for uses other than wilderness. In addition to the Federal acreage recommended for wilderness, BLM recommends that 661 acres of private lands be acquired through exchange or purchase and designated as wilderness. With acquisition of these inholdings, a total of 7,860 acres are recommended for wilderness. Appendix 1 lists all inholdings and provides additional information on their acquisition. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the Desert Plan and further explained in the California Wilderness Study Overview.

A portion of the Mecca Hills WSA is recommended for inclusion in the National Wilderness Preservation System (NWPS) because it possesses exceptional wilderness values, important special features, and unique landforms which will add to the diversity of the NWPS. These striking resources far outweigh any other potential use of the suitable area.

Within the rugged interior portion of this WSA, man's work is substantially unnoticeable. Inaccessible terrain and vehicle closures have ensured the area's naturalness. This same rugged terrain which precludes intrusions by man provides unlimited opportunities for solitude. The intricate passageways and complex canyon systems create a myriad of remote hideaways. Opportunities for primitive and unconfined types of recreation also abound in this WSA. The remarkable exposures, and the unsurpassed views make the suitably recommended interior of the Mecca Hills a magnificent stone park. From the higher elevations, outstanding, unobstructed views of the Coachella Valley, Salton Sea and majestic mountains which surround the area, are available. Because wilderness values are so significant, the suitability recommendation will preclude any further vehicular use of approximately 15 miles of primitive access routes of travel.

This WSA is replete with special features which add to the wilderness experience. The area contains three BLM sensitive plant species and four animal species of concern to BLM. The Mecca Hills are important culturally and ethnographically to Native Americans having been used extensively for countless generations. Lastly, the Mecca Hills is an important area for scientific research.

Located on the San Andreas Fault, the area's geologic characteristics continue to provide significant information on fault movement, erosional forces, and paleontological resources. A more complete discussion of these special features is given in the Wilderness Characteristics Section.

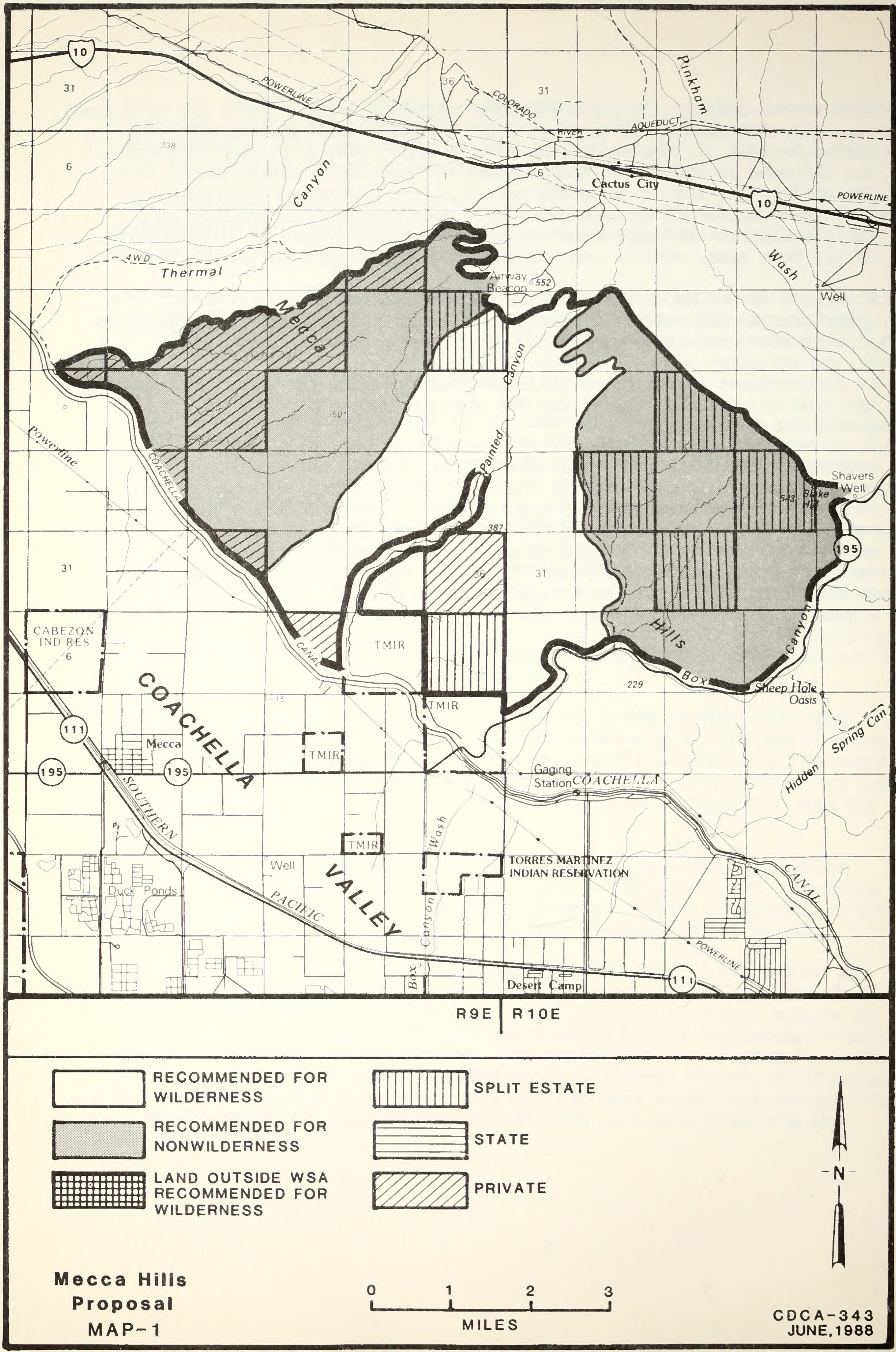
The diversity of geological features in this WSA is seldom found in the California Desert. Brilliant rock colors, exotic natural rock sculptures, narrow steep walled labyrinthine canyons, caves and overhangs combine in a constantly changing pattern to provide visitors with a continually intriguing set of impressions and experiences. The scenery is one of great geological upheaval. Immense layers of strata have been tilted, folded, uplifted and subsequently exposed to erosional forces. In many areas, the various colors of strata stand out vividly and contrast both with each other and the surrounding terrain.

Within the suitable area, few resource conflicts exist. There are no current mining claims within the suitable area. However areas classified as having high potential for the occurrence of sand and gravel and moderate potential for clay are is located in the southwestern portion of the suitable area. The entire WSA also has moderate potential for geothermal resources. Motorized recreation opportunities have been virtually eliminated by a vehicle closure with approximately the same boundary as the suitable area. Within this area, vehicle use has been prohibited for many years.

A portion of the Mecca Hills WSA is recommended nonsuitable because opportunities for motorized recreation and for the development of existing mineral resource values exceed the area's value as wilderness.

In the nortwest corner there are high potentials for the occurrence of clay and sand and gravel. The entire WSA also has moderate potential for geothermal resources.

Outside of the vehicle closure, off-highway vehicle use has always been one of the most significant uses of the nonsuitable portion. Because of the extremely rugged terrain, most use is found in the washes and the canyon bottoms. The terrain which is the primary attraction in the area is also the single most important obstacle to entry. However, where the terrain is less severe, vehicle use is extensive. There are approximately 25 miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use.


10
POWERLINE
COLORADO
RIVER
AQUEDUCT
Pinkham
Wash
Canyon
Cactus City
Thermal
Mecca
4WD
Airway Beacon
552
Painted
Canyon
501
387
36
31
6
1
338
Shavers Well
Blake Hill
543
195
Hills
Box
Canyon
Sheep Hole Oasis
Hidden Spring Can
Well
T5S
T6S
T7S
Powerline
COACHELLA
CANAL
CABEZON IND RES
TMIR
229
15
111
Mecca
COACHELLA VALLEY
SOUTHERN PACIFIC
Gaging Station
Duck Ponds
Box Canyon Wash
TORRES MARTINEZ INDIAN RESERVATION
Desert Camp
R9E
R10E
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES

Mecca Hills Proposal MAP-1

CDCA-343
JUNE, 1988

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	18,175
Split Estate	(BLM surface only)	0
Inholdings		
State		0
Private		3,367
Total		21,542

Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	7,199
BLM	(outside WSA)	0
Split Estate	(within WSA)[1]	0
Split Estate	(outside WSA)[1]	0
Total BLM Land Recommended for Wilderness		7,199
Inholdings[1]		
State		0
Private		661

Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	10,976
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		10,976

---

[1] Appendix 1 is a detailed description of inholdings and split estate tracts included within the study. For purposes of this report, split estate lands are defined only as those lands with Federal surface and non Federal subsurface (minerals). Lands that have Federal minerals but non Federal surface should be classified in this report by the owner of the surface estate.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The suitable area has remained pristine. Popular for weekend winter recreation, its "fortress-like" structure has prevented any significant damage or loss of its primitive quality. The unique topography, sparse vegetation and "moonscape" environment that the area provides is not duplicated anywhere within the CDCA.

   A few primitive ways affect naturalness in the nonsuitable portions of this WSA. However, generally, like the suitable area, the environment has been influenced primarily by the forces of nature.

2. Solitude: Although the study area is only sparsely vegetated by low growing shrubs, the terrain provides the screening needed to ensure that the opportunities for solitude are outstanding. The canyons and washes slice the area into a myriad of individual spaces which provide complete isolation.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: The study area lends itself to primitive types of recreation by virtually barring any other type. The area is pristine and evidence of past use is limited. What evidence there is will revert to a natural condition in time. There are no man-made barriers or surface disturbances which would tend to be confining. The opportunities for primitive recreational experiences are outstanding.

   The topography of the entire WSA ensures ideal hiking experiences as well as providing for many other types of primitive recreation opportunities. Recreationists have the option of walking along relatively flat surfaces or of climbing steep canyons. Photographers and painters have attempted to capture the spirit of this harsh environment for years. The scenic hills, picturesque badlands,and spectacular geology combine in a harsh desert setting to provide recreationists with a truly unique environment in which they can pursue their endeavors.

4. Special Features: The study area falls within the broad classification of the American Desert Province, containing the creosote bush bur sage (Larrea-Franseria) vegetative assemblage. Vegetation is sparse and the most notable is found in the washes. Three plants, Mecca aster (Xylorhiza cognantha), California ditaxis (Ditaxis california) and Orocopia sage (Salvia greatai) all candidates for Federal listing as rare or endangered, can be found

here. Bighorn sheep have been observed crossing into the Mecca Hills from the Orocopia Mountains where they water. Prairie falcon, desert tortoise and spotted bat have also been seen in the area. All these species are in some way endangered, and therefore protected by law. The desert tortoise (Gopherus agassizi) is under status review by the Fish and Wildlife Service. Currently, they are protected from collection and harassment by State law. The bighorn sheep (Ovis canadensis nelsoni) is listed as sensitive by the BLM. Prairie falcons have been observed in the Mecca Hills, one of the known nesting sites in the California desert. The area is generally believed to support several pairs. This species has been placed on the Audubon Society's Blue list, an early warning list of those species exhibiting declines throughout the majority of their range. The spotted bat (Euderma maculata) is the rarest North American bat (Brown,1979). Four specimens have been taken within the CDCA, all before 1956. One of the specimens was found in the Mecca Hills.

The Mecca Hills have been utilized by human populations for a variety of purposes for a considerable length of time. They have traditionally been used by Cahuilla Indians for collecting, and are currently used for the procurement of a variety of floral, faunal and mineral resources which are essential to their culture.

The Mecca Hills are known to have been utilized by aboriginal populations rather extensively during the Late Prehistoric Period, from approximately 900-1000 A.D. to approximately 1500-1600 A.D. It is highly likely that the area was used prior to this time, but evidence for this earlier period is inadequate. In spite of the fact that the Mecca Hills are known to be widely used, the potential for the presence of archaeological sites is rather low due to the topography of the area and to factors of extreme erosion. The area of greatest potential for sites has already been destroyed by construction of the Coachella Canal. The Mecca Hills have more importance ethnographically than archaeologically. The hills fall within the traditional territory of the Desert Cahuilla. A Cahuilla village, Maswat Helaanut, is documented to have been located at the mouth of Painted Canyon. This village is said to be that of Cabezon, a Desert Cahuilla leader.

The area was traditionally used by the Cahuilla for collecting certain plant and animal species, and for collecting a certain type of clay, not available elsewhere, which was used for making pottery vessels. These hills are still used for Cahuilla collection activities.

Finally, the Mecca Hills figure prominently in Cahuilla oral tradition and cosmology. Among other things, the Mecca Hills are known as the place to which Coyote ran to eat the heart of Mukat and, in doing so, stained the hills red. For this reason, these hills are still ritually significant to the Desert Cahuilla and other groups.

This area lies on the east side of the southern end of the San Andreas Fault System. Its geological characteristics continue to provide significant information on the cumulative offset and displacement by the fault zone of the earth's crust in California. This unusual resource has been used extensively by local colleges for study and research. The geologic features are remarkably exposed and constitute probably one of the most unique geological sites of its kind in the world. The hills abound with regions of upended, folded, faulted and eroded layers of rock completely exposed to the viewer.

B. Diversity in the National Wilderness Preservation System

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 18,175 acres of the American Desert/Creosote Bush-bur sage (*Larrea*-*Franseria*) ecosystem. Although this ecosystem is relatively ubiquitous throughout the Colorado Desert, diversity can be found geologically. The effect of the major faults in the region have been to bring together five distinct geologic terrains which are rarely found so compactly juxtaposed. Designation of the Mecca Hills WSA will be a significant addition to the NWPS.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas		Other BLM Studies	
	areas	acres	areas	acres
	NATIONWIDE			
American Desert/Creosote Bush-Bur Sage	3	126,033	48	1,553,890
	CALIFORNIA			
American Desert/Creosote Bush-Bur Sage	2	26,427	20	959,429

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of nine major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a five-hour drive of the population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas		Other BLM Studies	
	areas	acres	areas	acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Bakersfield	32	4,071,358	128	3,998,548
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Oxnard-Ventura	23	2,195,198	85	2,703,260
Riverside-San Bernardino	22	2,031,054	205	7,658,649
Santa Barbara-Santa Maria-Lompoc	20	1,166,142	35	528,590
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The WSA is within 50 air miles of nine BLM WSAs recommended for wilderness designation. The closest designated wilderness areas are in JTNM, managed by the National Park Service, seven miles north. There are four other designated areas within a 50 mile radius: San Jacinto and Santa Rosa Wilderness Areas, administered by San Bernardino National Forest; and Anza Borrego and Mt. San Jacinto State Wilderness Areas, administered by the California State Parks System.

C. Manageability

The Mecca Hills WSA is manageable as wilderness. However, there are several factors which will create significant manageability problems.

Manageability is complicated by the existence of a powerline that traverses the southwest portion of the WSA. The powerline, which parallels the Coachella Canal, is primarily located in the nonsuitable portion of the WSA. However, approximately one-half of a mile of the 25 foot right-of-way is located in the suitable area. The powerline was constructed prior to the passage of FLPMA and its inclusion in the WSA was an inventory error. Therefore, the right-of-way is a valid existing right that will not be abrogated by the passage of wilderness legislation. Manageability will be affected by maintenance of the tower structures and ancillary road.

The suitable area boundaries are, for the most part, defined only by subtle topographic features. Not readily definable on the ground, these boundaries will require extensive signing and detailed mapping to ensure their integrity.

The suitable portion of the WSA contains no unpatented mining claims; the nonsuitable portion contains 21 unpatented mining claims. Management of the nonsuitable portion as wilderness would be complicated by the potential for valid existing mineral rights.

In the nonsuitable area, manageability is more difficult than in the suitable area. In addition to management problems generated by the powerline and poorly defined boundaries, the nonsuitable area has long attracted motorized recreationists. This activity will be extremely difficult to curtail should the area be designated as wilderness. Constant patrolling, signing and barricades will be needed to reduce vehicle use in the area.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Mecca Hills WSA is within the BLM Coachella Geology-Energy-Minerals (GEM) Resource Area (GRA). The 1980 suitability recommendation for the WSA was based on information from the Coachella GRA file which identified clay, sand and gravel, geothermal, and oil and gas resources in the WSA. The 1980 GRA indicated that sand and gravel had been mined outside the western boundary since the 1960's. This deposit also occurs in the alluvial fans along the hill slopes within the WSA. Oil and gas leases covered most of the WSA in 1980. The 1980 GRA identified a moderate potential for the occurrence of oil and gas resources in the southwest portion of the WSA based on the leases held in the study area in 1980.

   Hot springs and geothermal resources are documented in the GRA as occurring in the WSA. The entire WSA was identified in the GRA as having moderate potential for geothermal resources and was classified by the U.S. Geological Survey (USGS) as a Potential Geothermal Resource Area (PGRA) in 1978.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Recommendation: In 1984, the Bureau of Mines (BOM) published MLA 35-84 and in December 1987, a draft preliminary report was obtained from USGS and BOM assessing the results of the mineral survey in the WSA. Both reports evaluated the mineral resources of the suitable area of the WSA.

   In the BOM report, potential (not quantified) for clay, and sand and gravel was identified in the WSA. The USGS/BOM report indicated that the WSA had a low potential for occurrence of oil and gas resources. Since the suitable recommendation was made, all oil and gas leases in the WSA have been abandoned and no additional leases were issued since the congressional moratorium on leasing issued in 1983.

In the northwest corner, a mining claim has been located within an area that has a high potential for clay. BLM has approved a mining plan of operation, determined to be nonimpairing, for the extraction of this resource. A reclamation bond has been filed with the BLM. However, as of December 1, 1987, no mining has begun. The USGS and BOM reports document the occurrence of moderate potentials for clay resources in the southern portion of the suitable area. There are also high potentials for sand and gravel in the suitable portion and in the nonsuitable segment A.

Unpatented mining claims located in the WSA are summarized in the following table taken from BLM mining claim records dated December, 1987.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	0	0	0	0	0	0
Placer	0	21	21	0	840	840
Mill Site	0	0	0	0	0	0
Total	0	21	21	0	840	840

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: In the suitable area, wilderness values will be maintained. In the nonsuitable area, impacts caused by motorized vehicle recreation will affect naturalness, solitude and the quality of primitive and unconfined types of recreation along approximately ten miles of designated routes of travel which will remain open. Mineral extraction will impact naturalness in small, localized spots on the WSA's western edge.

2. Impact on Motorized Recreation Opportunities: Opportunities for motorized recreation on designated routes of travel will continue to be available. Future trends indicate that use here will increase. Because of the existing vehicle closure, designation of the suitable area will have no impact on this activity.

3. Impact on Native American Collecting Activities: Impacts to Native American collecting activities will be negligible. In the suitable area, access has previously been restricted. In the nonsuitable areas, collecting activities will continue as normal. Some loss of collection materials may occur as a result of mineral development.

4. Impact on Bighorn Sheep/Habitat: The proposed action will have no impact on bighorn or their habitat. Protective measures as outlined in the CDCA Plan and Orocopia Habitat Management Plan are already in place.

5. Impact on Desert Tortoise/Habitat: Desert tortoise and their habitat will not be significantly affected by the proposed action. State laws and management guidelines in the CDCA Plan protect this species throughout the WSA.

6. Impact on Scientific Research: Scientific research in the suitable area will be affected by the restrictions placed on the use of mechanized equipment. In the nonsuitable areas, research will be allowed to continue subject to any restrictions outlined in the CDCA Plan.

7. Impact on BLM Sensitive Plant Species: In the suitable area, habitat for these species will be maintained. In the nonsuitable area, habitat loss will be restricted to small, localized areas of mineral development. Management guidelines as listed in the CDCA Plan will help protect these sensitive species.

F. Local Social and Economic Considerations

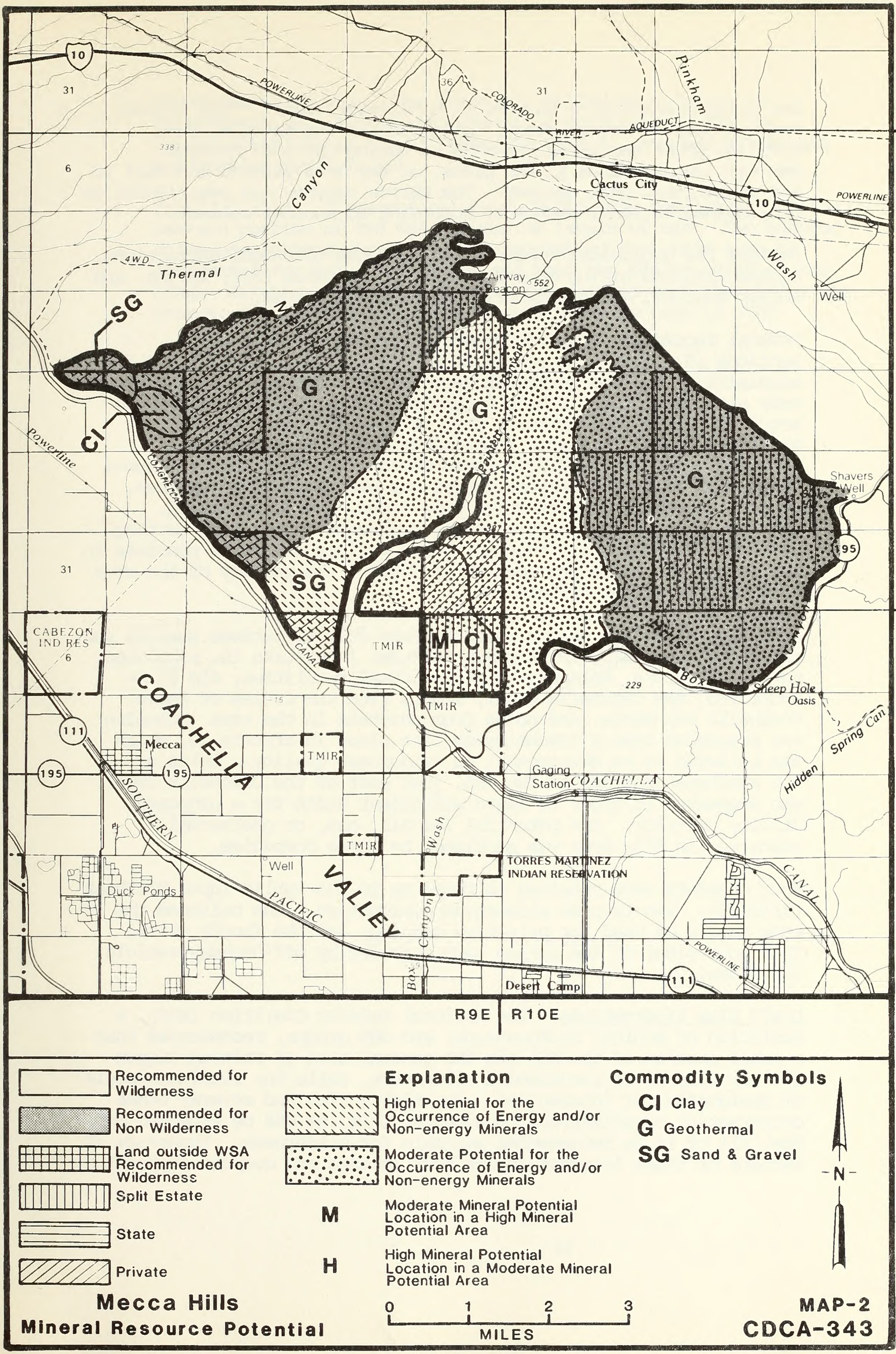
No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of his topic will occur in this document.

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Inaccuracies that are known to exist are noted in parentheses.

1. Inventory Phase: Comments against inclusion of this area in the wilderness study cited the history of motorized vehicle use. Field examination confirmed that evidence of this use was, for the most part, confined to sandy canyon bottoms and would pass with time; therefore, the impact was not long term and would not impair suitability of the area for consideration as wilderness.

2. Study Phase: Of the 39 letters received in response to this WSA, 19 (50%) supported wilderness designation, and the remaining 20 preferred to leave the area open for multiple use. The major reason for urging wilderness status were the unique geological character of the area and its outstanding opportunities for solitude and primitive recreation.



10
31
POWERLINE
36
COLORADO
RIVER
AQUEDUCT
Pinkham
T5S
T6S
338
6
Canyon
Cactus City
10
POWERLINE
Wash
4WD
Thermal
Airway Beacon
552
Well
SG
G
G
G
CI
Powerline
COACHELLA
Painted Canyon
Shavers Well
195
T6S
T7S
31
SG
CABEZON IND RES
6
TMIR
M-CI
CANAL
Hills
Box Canyon
229
Sheep Hole Oasis
TMIR
COACHELLA
111
Mecca
TMIR
195
195
Gaging Station
COACHELLA
Hidden Spring Can
SOUTHERN
Wash
TMIR
TORRES MARTINEZ INDIAN RESERVATION
Well
VALLEY
Duck Ponds
PACIFIC
CANAL
Canyon
POWERLINE
Box
Desert Camp
111
R9E
R10E
Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potential for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
CI Clay
G Geothermal
SG Sand & Gravel
N
0 1 2 3
MILES

Mecca Hills
Mineral Resource Potential

MAP-2
CDCA-343

One person submitted a University of Arizona report, "The Mojave-Sonoran Natural Region Study," prepared for the National Park Service, which described the area as having the most diverse geology, concentrated in one place, of any area studied and felt it was of national park caliber. The narrow canyons are reminiscent of Canyonlands National Monument, according to another comment.

Besides its geological wonders, the area has botanical attractions, backpacking and hiking opportunities, comfortable fall, spring and winter weather, and prehistoric and historic values.

Several recommendations for expansion of the WSA were made. Sections 15, 16, 17, 20 and 21 of R. 9 E., T. 6 S. were listed for acquisition, and the northwest Mecca Hills and Thermal Canyon areas were also mentioned. Others suggested that all of the polygon be acquired except the northwest part of Thermal Canyon to the microwave tower. The area complements Joshua Tree National Monument. Opponents of wilderness designation mentioned the above values but felt that vehicle access was necessary to enjoy them. Several recreational activities were noted, including hiking, camping, photography, nature study, geological study, and hunting. Some who commented felt that motorized vehicle access is possible in the washes and would produce little damage; the geology of the area controls the extent of this use.

Sight and sound intrusions which detract from wilderness quality and necessitate boundary adjustments include: Interstate 10, pipelines, pumping stations, telephone and electrical facilities, old State Route 195, the Coachella Canal, lights from the cities of Indio, Coachella and Mecca, and noise from shooters in the area. Concern was expressed over a transmission line along Interstate 10, which was believed to be detrimental to wilderness quality. Deletion of the southwest portion of the WSA, just east of the Coachella Canal, was suggested in order to leave sufficient width for a proposed utility corridor. The potential for oil, gas, or geothermal resources in this area was mentioned by three companies.

Four comments were received in response to the Public Input Workbook (3/15/79). Two favored wilderness designation. One believed the area should be used for primitive camping, and the fourth stated that both sides of the canyon were degraded by off-highway vehicle (OHV) use.

3. Draft Plan Alternatives: The National Outdoor Coalition (NOC), a coalition of mining, rockhounding, and OHV groups, recommended that a small portion of the WSA (in the general area of Painted Canyon and Box Canyon) be recommended wilderness, while the remainder would be designated for intense use. The Sierra Club and several other conservation organizations recommended that the WSA be expanded and that all of it be recommended suitable for wilderness. Thousands of members of these interest groups sent letters and coupons supporting

these points of view. The Coachella Valley Association of Governments, a regional planning group which represents the incorporated cities of the Coachella Valley, endorsed wilderness designation for this WSA.

4. Proposed Plan: Conservationists protested the designation of the eastern portion of the WSA for medium levels of use. Two hundred fifty-one letters were received requesting that this area be designated for only limited use and that the WSA be added to the JTNM. Off-highway recreationists were pleased with the medium use status; six letters asked that no additions be made to JTNM.

APPENDIX 1

ESTIMATED COSTS OF ACQUISITION OF NON-FEDERAL HOLDINGS WITHIN AREAS RECOMMENDED FOR DESIGNATION

MECCA HILLS WSA (CDCA-343)

PARCEL No.	LEGAL DESCRIPTION TWNSHP	RNG	SEC	MERIDIAN	TOTAL ACREAGE	NUMBER OF OWNERS	TYPE OF OWNERSHIP BY ESTATE SURFACE ESTATE	SUBSURFACE ESTATE	PRESENTLY PROPOSED FOR ACQUISITION	PREFERRED METHOD OF ACQUISITION	ESTIMATED COST OF ACQUISITION LAND COSTS ($1000)	PROCESSING COSTS ($1000)
1	7S.	9E.	3	SBM	40	1	PRIVATE	PRIVATE	YES	PURCHASE	4.0	2.5
2	7S.	9E.	3	SBM	40	1	PRIVATE	PRIVATE	YES	PURCHASE	4.0	2.5
3	7S.	9E.	3	SBM	40	1	PRIVATE	PRIVATE	YES	PURCHASE	4.0	2.5
4	7S.	9E.	3	SBM	40	1	PRIVATE	PRIVATE	YES	PURCHASE	4.0	2.5
5	7S.	9E.	3	SBM	40	1	PRIVATE	PRIVATE	YES	PURCHASE	4.0	2.5

These figures were derived from Bureau Land Records and provide for more detail than GIS estimates and therefore may differ from acreage summaries in Table 1.

Orocopia Mountains

CDCA 344

OROCOPIA MOUNTAINS WILDERNESS STUDY AREA (WSA)

(CDCA-344)

1. THE STUDY AREA --- 72,857 acres

The Orocopia Mountains WSA is located in Riverside County in the southern portion of the California Desert Conservation Area (CDCA). The closest community is Indio, located approximately 20 miles northwest. The WSA includes 50,356 acres of public land administered by the Bureau of Land Management (BLM), 2,974 acres of State land, and private inholdings totalling 19,527 acres (see Map 1 and Table 1).

The western boundary of the WSA runs along Highway 195, Box Canyon Road, to where it intersects with the Coachella canal. The southern boundary follows the canal right-of-way, excluding diversion dikes, until the canal is joined by the Bradshaw Trail. The remaining portion of the southern boundary proceeds along the Bradshaw Trail, a railroad, and small private land boundaries to Red Canyon Jeep Trail. This trail forms the eastern boundary. The northern boundary is formed by section lines between Red Canyon Jeep Trail and Box Canyon Road.

This WSA included both the Orocopia Mountains and the southeastern portion of the Mecca Hills. This portion of the Mecca Hills consists of highly eroded badlands. The Orocopia Mountains are an extremely diverse and varied mountain landform. The northern portion is characterized by open valleys and dissected ridges. The southern portion consists of highly colorful and dramatic eroded canyons and ridges. Vegetation is sparse but varied. In the open valleys, creosote can be found. Stands of ironwood are located in the washes and ocotillo is found on the hilly slopes. A small cluster of yucca is located near the Red Canyon jeep trail. Elevation ranges from near sea level along the Coachella Canal to peaks which rise over 3,600 feet.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EIS) for the CDCA Plan: protection, use, balanced and no action, and a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

38,463	acres recommended for wilderness
22,149	BLM acres recommended for nonwilderness

Partial wilderness (62% suitable) is the recommendation for this WSA. The 22,149 acres in this WSA recommended non-suitable are released for uses other than wilderness. In addition to the public land recommended for wilderness, BLM recommends that 1,940 acres of State land and 8,316 acres of private land be acquired through purchase or exchange and designated as wilderness. With the acquisitions of these inholdings, a total of 38,463 acres are recommended for wilderness. Appendix 1 lists all inholdings and provides additional information on their acquisition. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The suitable portion of the Orocopia Mountains WSA is recommended for inclusion in the National Wilderness Preservation System (NWPS) for the following reasons: (1) the area's wilderness values are outstanding and by far exceed the values of competing resources; and (2) the area possesses numerous special features which would be enhanced by wilderness designation.

The forces of nature at work in this area have produced a striking landscape, accentuated by a variety of landforms. The mountains fall within the San Andreas fault system and display regions of upended, folded, faulted and eroded layers of rock. The general lack of vegetation tends to accentuate the intricate patterns. Deep canyons and washes dissect the entire area exposing walls that range in color from bright red to black. Here, man's imprint is substantially unnoticeable. Enhanced by the coarse relief, opportunities for solitude and for primitive and unconfined types of recreation are available throughout the suitable area. Because wilderness values are so significant, the suitability recommendation will preclude any further vehicular use of approximately 60 miles of primitive access routes of travel.

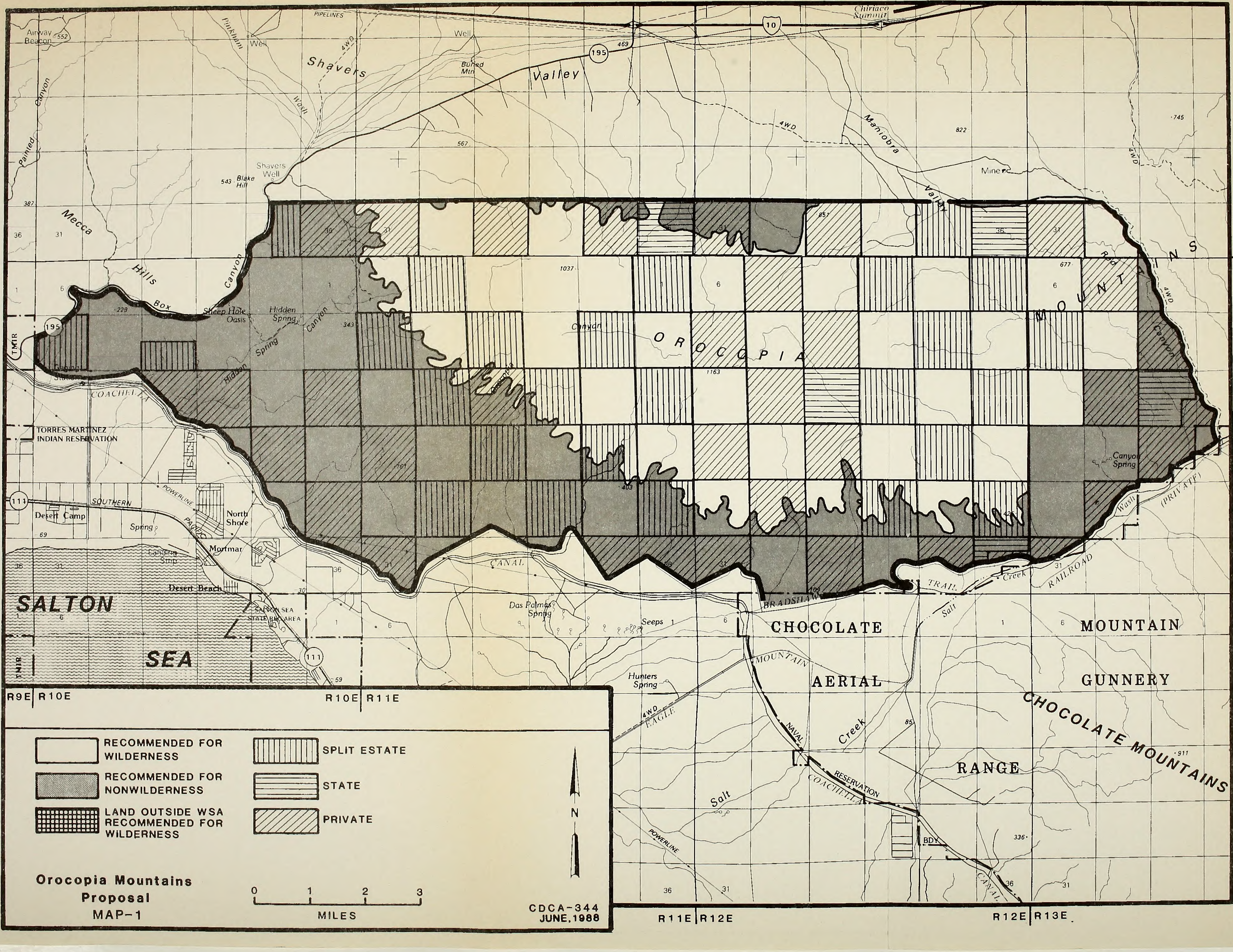
Within the Orocopia Mountains, bighorn sheep, burro deer, desert tortoise and many small upland game species can be found. The area also supports four plant species recognized by the California Native Plant Society as rare, threatened, or endangered. Also, the WSA contains areas of cultural resource concentration and Native American significance. A more detailed discussion of these special features are described in the Wilderness Characteristics section.

Wilderness designation of the suitable area would result in conflicts with mining activities. As of December, 1987, 398 mining claims had been located within the suitable portion of the WSA. Mineral surveys conducted by the U.S. Geological Survey and Bureau of Mines identified areas possessing high potential for the occurrence of low grade disseminated gold and moderate potential for the occurrence of lead, zinc, talc, actinolite, boron and gypsum. The entire WSA is classified as having moderate potential for the occurrence of geothermal resources. Mineral resources appear to be this area's only resource which conflicts with wilderness designation.

The remaining portion of the WSA is recommended nonsuitable to allow continued access for geologic, energy, and mineral exploration and development, for motorized vehicle recreational opportunities, and for Native American collecting activities. The mineral surveys indicate that within the nonsuitable portion, there are areas possessing high potential for the occurrence of fluorite. Also, known deposits of manganese and gold are found in the nonsuitable area. Potential for the occurrence of geothermal resources is moderate within the nonsuitable area.

The nonsuitable western portion of the WSA, especially the southern Mecca Hills, is extremely popular with motorized recreationists. A network of vehicle ways traverses the area's washes and rolling hills. Because of the badlands topography, these ways are obscured with each rain and, therefore, do not impair the area's wilderness values. Closure of this area, should wilderness designation occur, would displace hundreds of recreationists who visit the area annually. There are approximately 25 miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use.

The area surrounding Hidden Springs, located in the nonsuitable Mecca Hills, contains Native American resources of both sacred and secular significance. Native Americans continue to collect basket weaving material throughout the western portion of the WSA. Wilderness designation would preclude access to traditional collection areas, negatively impacting this activity.



Orocopia Mountains Proposal

MAP-1

CDCA-344

JUNE, 1988

RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0 1 2 3
MILES
OROCOPIA
MOUNTAINS
Shavers Valley
Shavers Wash
Shavers Well
Mecca Hills
Box Canyon
Sheep Hole Oasis
Hidden Spring
Hidden Spring Canyon
Painted Canyon
Airway Beacon
Pinkham Well
Well
Buried Mtn
Blake Hill
PIPELINES
Chiriaco Summit
10
195
111
4WD
Mine
Red Canyon
Canyon Spring
Manlobia Valley
COACHELLA CANAL
TORRES MARTINEZ INDIAN RESERVATION
TMIR
SOUTHERN PACIFIC
POWERLINE
Desert Camp
Spring
North Shore
Mortmar
Landing Strip
Desert Beach
SALTON SEA
SALTON SEA STATE REC AREA
Das Palmas Spring
Seeps
Hunters Spring
BRADSHAW TRAIL
Salt Creek
RAILROAD
(PRIVATE)
Wash
CHOCOLATE MOUNTAIN AERIAL GUNNERY RANGE
MOUNTAIN NAVAL RESERVATION
EAGLE
Creek
Salt
BDY
CHOCOLATE MOUNTAINS
T6S
T7S
T8S
R9E R10E
R10E R11E
R11E R12E
R12E R13E

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	50,356
Split Estate	(BLM surface only)	0
Inholdings		
State		2,974
Private		19,527
Total		72,857

Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	28,207
BLM	(outside WSA)	0
Split Estate	(within WSA)[1]	0
Split Estate	(outside WSA)[1]	0
Total BLM Land Recommended for Wilderness		28,207
Inholdings[1]		
State		1,940
Private		8,316

Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	22,149
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		22,149

---

[1] Appendix 1 is a detailed description of inholdings and split estate tracts included within the study. For purposes of this report, split estate lands are defined only as those lands with Federal surface and non Federal subsurface (minerals). Lands that have Federal minerals but non Federal surface should be classified in this report by the owner of the surface estate.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: Within the suitable area, the imprint of man's work is substantially unnoticeable. Much of the suitable area was closed to motorized vehicles until 1987 when a CDCA Plan amendment changed the access classification from "closed" to "limited to existing roads and trails." This vehicle closure, coupled with rugged, inaccessible terrain, precluded most vehicle entry and therefore, the area's primitive character has been maintained. Some primitive ways penetrate the nonsuitable portion of the WSA. Several water sources, located in the WSA, have been improved to provide year-round water for wildlife, however, they do not significantly affect the area's naturalness. The immensity and ruggedness of the terrain remain the dominant feature of the Orocopia Mountains WSA.

2. Solitude: Opportunities for solitude abound. The rugged character of the terrain and the diversity of landforms ensure a sense of seclusion throughout the WSA. Rocky outcrops and numerous canyons add to the ability of the landscape to screen visitors and add to the sense of isolation.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: Opportunities for primitive and unconfined types of recreation are available throughout. The area is free of trammels and lends itself to this type of activity. Deep washes and canyons within a variety of desert vegetation types provide numerous challenges.

4. Special Features: The Orocopia Mountains provide permanent range and seasonal range for Nelson's bighorn sheep (Ovis canadensis nelsoni). Based on recent sightings and field work, the Orocopia Mountain herd is estimated to be as large as 80 individuals. One bighorn guzzler is located within the WSA and provides permanent water for this heard.

   Desert tortoise (Gopherus agassizi), a BLM sensitive species, is found in the eastern portion of the WSA. Desert tortoise densities are expected to range from 0-50 per square mile.

   There are four plant species of special concern within the WSA. Three of these species have been included on the California Native Plant Society's List of Rare and Endangered Plants in California. Orocopia sage (Salvia greatai) is a very localized species known from washes of the Orocopia Mountains, Mecca Hills and the Chuckwalla Mountains. Several individuals of this spiny-leaved shrub are documented at Clemens Well in Salt Creek Wash. Alverson's foxtail cactus (Coryphantha vivipara var. alversonii) has been found in the extreme northeast portion of the study area. This mound type cactus grows on areas of stony slopes from the Little San Bernardino Mountains to the Eagle and Chuckwalla Mountains. Orcutt's woody aster (Xylorhiza orcutti) is found in gypsum soils below 1,000 feet in creosote bush scrub communities in the southwestern Colorado Desert and Imperial and San Diego Counties. These three species are candidates for Federal listing as rare and endangered and have been included on California BLM's list of sensitive species. The Mecca aster (Xylorhiza cognata) has been included on the California Native Plant Society's List of Plants of Limited Distribution. This is a species of limited distribution found in and around the Mecca Hills. It is not currently a candidate for Federal listing.

This WSA contains Native American resources of both sacred and secular significance. The area of Hidden Spring in the northeast section of the WSA is both sacred and an ancient habitation site called Pa-Ha-Pe-Che. The Dos Palmas area, referred to as Par-Nes-Pa by Native Americans, is a sacred place located on the extreme southern border of the WSA; it is known as a shaman initiation center and place of cremation and worship. Basket materials are collected throughout the entire western portion of the WSA (Knack, 1980, p.48). The Serrano-Cahuilla territorial boundary runs east to west through the center of the WSA.

B. Diversity in the National Wilderness Preservation System

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 50,356 acres of the American Desert/Creosote Bush-Bur Sage ecosystem. The variety of geologic formations found throughout the site is seldom seen in a single WSA. From steep, red walled canyons, to black volcanic masses, to flat sandy washes, its diversity is unique. The suitable area is exemplary of the ecosystems contained within the Colorado desert portion of the California desert.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas areas	NWPS Areas acres	Other BLM Studies areas	Other BLM Studies acres
	NATIONWIDE			
American Desert/Creosote Bush-Bur Sage	3	126,033	48	1,521,709
	CALIFORNIA			
American Desert/Creosote Bush-Bur Sage	2	26,427	20	927,248

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of seven major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a five-hour drive of the population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas		Other BLM Studies	
	areas	acres	areas	acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Oxnard-Ventura	23	2,195,198	85	2,703,260
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The WSA is within 50 air miles of eight BLM WSAs recommended for wilderness designation. The closest designated wilderness areas are in Joshua Tree National Monument managed by the National Park Service, situated five miles north. The following designated wilderness areas are also within 50 air miles: San Jacinto and Santa Rosa Wilderness Areas, administered by San Bernardino National Forest, Mount San Jacinto State Wilderness Area, and State wilderness areas located in Anza-Borrego Desert State Park.

C. Manageability

The Orocopia Mountains WSA is manageable as wilderness. However, manageability of the suitable area is complicated by an irregular boundary, numerous private inholdings, and existing private rights associated with mining claims.

The suitable area boundary is delineated by contour lines for much of its length; a portion of the northern boundary is marked by section lines. Only the northeastern boundary, which follows Red Canyon jeep trail, is readily identifiable on the ground. Because of the lack of easily recognizable features along most of this boundary, some signing and detailed mapping will be required so inadvertent intrusions by motorized vehicles can be avoided.

The suitable portion of the WSA contains 200 separate private parcels. Acquisition of at least the majority of these parcels is necessary to ensure the integrity of the WSA's wilderness values. Development of any these parcels would significantly impair wilderness values on the surrounding public lands.

Presently, one bighorn guzzler is located within the nonsuitable portion of the WSA. Maintenance is required approximately two times per year and normally requires mechanized equipment and vehicles for transportation of materials to the site.

The portion of the WSA recommended suitable for wilderness designation contains 398 unpatented mining claims. After designation, valid claims are allowed to continue with mining activities that are necessary and reasonably incidental to the mining operation after designation occurs. The only restrictions placed on these activities is that they not cause unnecessary or undue degradation, leaving sufficient latitude to cause severe impacts to existing wilderness values. These claims must be cleared or the mineral rights purchased to avoid impacts to wilderness values.

The nonsuitable area would be equally as difficult to manage. Here, there are more private parcels that require acquisition, and more mining claims that require clearance or purchase. Although the western, southern, and eastern boundaries are easily discernable on the ground, the northern boundary would still require signing and mapping for identification by the public. Lastly, manageability would be complicated by attempts to displace the current motorized vehicle use occurring in the western portion of the WSA. This popular activity would be difficult to curtail without intensive patrolling and the installation of signs and barriers.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Orocopia Mountains WSA is located within the BLM Orocopia Mountains Geology-Energy-Minerals (G-E-M) Resource Area (GRA). The wilderness section of the 1980 CDCA Plan (Volume B, Appendix III) stated that the WSA had potential for talc, manganese, and other metals in the western and central portions of the WSA. Public comments to the 1980 draft EIS stated that geothermal potential existed in the western third of the WSA. Oil and gas potential in the western portion of the WSA was also noted.

The 1980 GRA file shows that most of the WSA had been classified by the U.S. Geological Survey (USGS) in 1978 as a Possible Geothermal Resource Area (PGRA). An occurrence of manganese was identified in the GRA in the extreme west end of the Orocopia Mountains, at the Big Bullet mine. A gold occurrence at the Dos Palmas mine is cited in the recommended suitable, south central portion of the WSA. This gold mine is located within the Dos Palmas gold mining district on the Orocopia thrust fault zone. No production was recorded. An occurrence of fluorospar at the Orocopia mine is noted north of the WSA boundary in the Orocopia mining district. Talc deposits were noted as being mined at the Tunnel Mine in the south central portion of the WSA. The 1980 GRA noted geochemical anomalies for lead, molybdenum, and boron occurring in the east part of the WSA. Map 2 illustrates the mineral classification of the WSA.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should Be Considered in the Final Recommendation: The USGS and Bureau of Mines (BOM) conducted a mineral survey of the suitable portion of the WSA in 1983. A report of the BOM findings was released in 1984 as Mineral Land Assessment MLA 7-84. In December, 1987, a preliminary draft summary report for the WSA was obtained for the USGS and BOM. New data from these surveys indicates a higher potential for occurrence of mineral resources within the suitable area than was indicated in the 1980 BLM GRA file.

The USGS classified a north-south trending strip of crystalline rocks as having a high potential for the occurrence of low grade disseminated gold cutting across the north-central to the southeastern recommended suitable portion of the WSA. An area located within the Orocopia Schist Formation was classified as having a high potential for the occurrence of hydrothermal vein type gold and a moderate potential for the occurrence of lead and zinc within a belt extending from the north-central to the southeastern recommended suitable portion of the WSA. There is also a moderate potential for the occurrence of talc and actinolite in isolated pods of altered basic rocks. BOM sampled the Orocopia Mine. The analysis of the ore showed a calcium fluorite content in the ore as high as 97.8%. Reserves are estimated in the USGS and BOM report at 5000 tons. The granitic rock body in which this deposit occurs extends into the WSA from the north.

This area, located in the northeast portion of the nonsuitable area was not classified by USGS or BOM. However, under the BLM classification system the area is considered as having a high potential for the occurrence of fluorite.

The USGS and BOM suggest that the eastern portion of the WSA has a moderate potential for the occurrence of boron and gypsum in evaporite deposits. They also indicate that there is little potential for oil and gas, because the Tertiary sediments are too thin to be a hydrocarbon source rock. A moderate potential for the occurrence of geothermal resources under the BLM classification system is assigned to the WSA. This classification is based on the BLM prospectively valuable classification for geothermal resources, and proximity to hot springs or hot water wells in the same geologic environment to the southwest and northwest of the WSA.

Since 1980, there have been four exploration plans of operation filed with the BLM. Utah International operated in the south central portion of the WSA to evaluate possible gold deposits. In 1987, U. S. Borax completed and exploration drilling program for borates in the western Orocopia Mountains. The results of these operations were not known as of December, 1987. Unpatented lode mining claims are concentrated in the southeastern portion of the recommended suitable and nonsuitable portions of the WSA. Unpatented mining claims located in the WSA are summarized in the following table taken from BLM records dated December, 1987.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	398	120	518	7,960	2,400	10,360
Placer	0	0	0	0	0	0
Mill Sites	0	0	0	0	0	0
Total	398	120	518	7,960	2,400	10,360

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: In the suitable portion of the WSA, wilderness values will, for the most part, be maintained. Development of any claims possessing valid existing rights will adversely affect naturalness. In the nonsuitable area, mineral development will cause localized adverse impacts to naturalness. These impacts will occur in the mineralized portion of the WSA, covering roughly 40% of the WSA. Opportunities for solitude and primitive and unconfined types of recreation will be adversely impacted along vehicle route corridors by the continued use of off-highway vehicles. In the nonsuitable area, approximately 25 miles of routes will remain open.

2. Impact on Locatable Mineral Exploration and Development: The proposed action will cause significant adverse impacts to this activity in the suitable portion of the WSA, except for those claims possessing valid existing rights. In the nonsuitable area, exploration and development of mineral resources will be allowed to continue, subject to the regulations stated in 43 CFR 3809 regarding surface disturbance, as well as any additional constraints stated in the CDCA Plan.

3. Impact on Access and Motorized Recreation Opportunities: In the suitable portion of the WSA, motorized access will be eliminated. In the remaining area, motorized vehicles will continue to be allowed on designated routes of travel. Approximately 25 miles of routes, located within the boundaries of this WSA, will remain open.

4. Impact on Bighorn Sheep/Habitat: Habitat in the suitable area will remain in its present condition. Herd management and placement and maintenance of water guzzlers will be constrained by wilderness designation because of restrictions placed on the use of mechanized equipment and motorized vehicles. In the nonsuitable areas, habitat will receive localized adverse impacts from mineral exploration and development. Individual animals may be discouraged from using areas of high recreational use because of noise and human intrusion. However, management actions outlined in the Orocopia Mountains Habitat Management Plan will mitigate these impacts by providing seasonal vehicle closures and other appropriate protective measures.

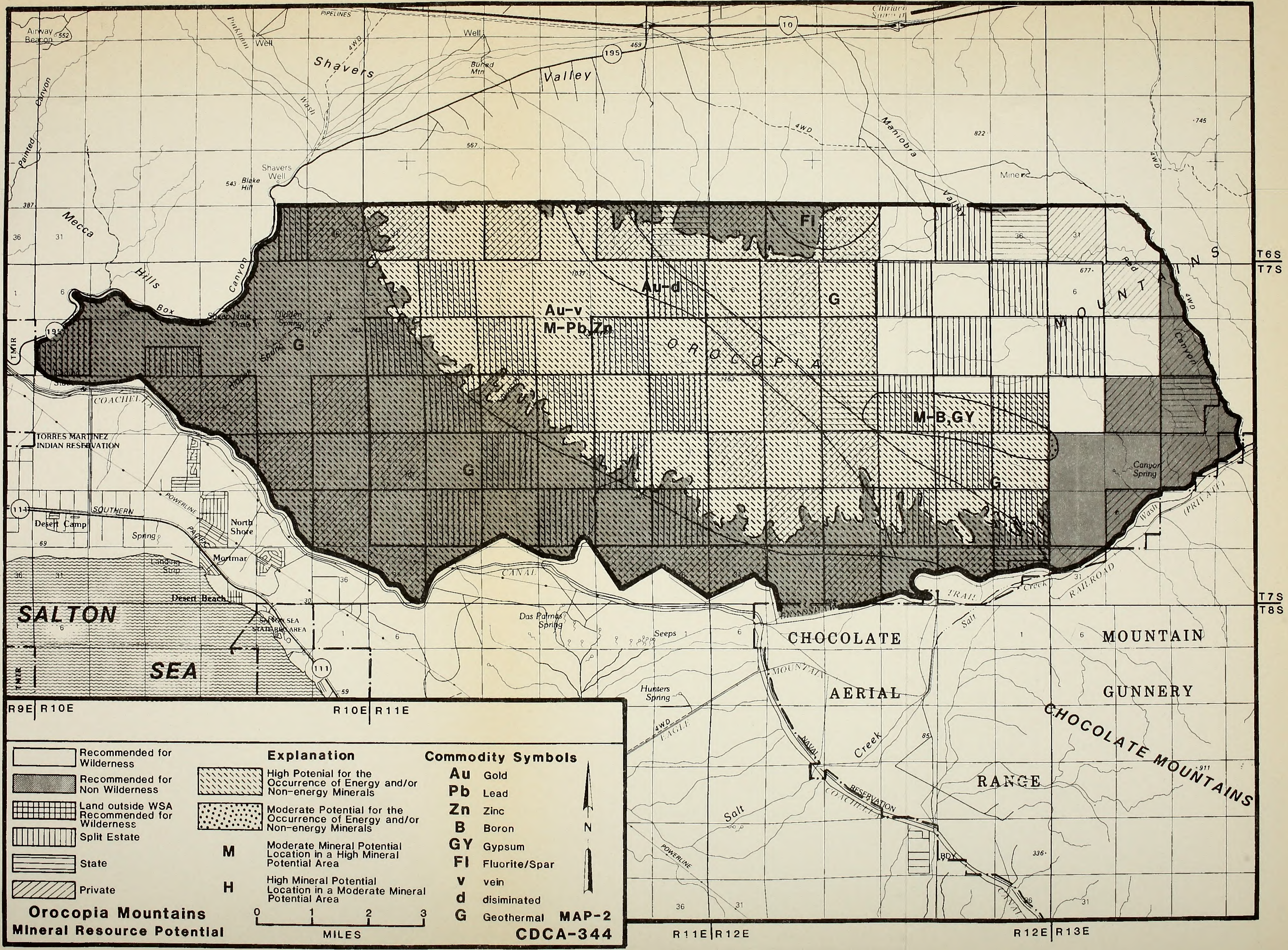
5. Impact on Desert Tortoise/Habitat: Impacts on the desert tortoise will be negligible, consisting of localized habitat loss caused by mineral development and occasional disturbances of individual animals by human intrusion. State laws and BLM management guidelines help protect this species and their habitat throughout this WSA.

6. Impact on Sensitive Plant Species/Habitat: Those species whose habitats coincide with the suitable area will gain some additional protection. In the nonsuitable area, localized impacts caused by mineral exploration and development and vehicle use in designated washes will adversely affect these species' habitats. However, total habitat loss attributable to these activities will be less than five percent of the suitable habitat in the WSA. Management guidelines listed in the CDCA Plan and the Orocopia Mountain Habitat Management Plan adequately protect these sensitive species throughout the WSA.

7. Impact on Native American Collecting Activities: Most of the traditional collection areas are located in the nonsuitable portion of this WSA where vehicle access will continue to be allowed. Therefore, this vehicle dependent activity will not be impacted by the proposed action.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.


Orocopia Mountains
Mineral Resource Potential
MAP-2
CDCA-344
▭ Recommended for Wilderness
▩ Recommended for Non Wilderness
▦ Land outside WSA Recommended for Wilderness
▥ Split Estate
▤ State
▨ Private
Explanation
▧ High Potenial for the Occurrence of Energy and/or Non-energy Minerals
▒ Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
Au Gold
Pb Lead
Zn Zinc
B Boron
GY Gypsum
Fl Fluorite/Spar
v vein
d disiminated
G Geothermal
0 1 2 3
MILES
N
Au-v
M-Pb,Zn
Au-d
Fl
G
M-B,GY
OROCOPIA
MOUNTAINS
Shavers Valley
Shavers Well
Blake Hill
Buried Mtn
Well
Pipelines
Airway Beacon
Painted Canyon
Mecca Hills
Box Canyon
Hidden Spring
Canyon Spring
Red Canyon
Manjobra Valley
Mine
Chiriaco Summit
SALTON SEA
Desert Camp
Desert Beach
North Shore
Mortmar
Spring
Landing Strip
Salton Sea State Rec Area
TORRES MARTINEZ INDIAN RESERVATION
COACHELLA CANAL
SOUTHERN PACIFIC
POWERLINE
RAILROAD
Das Palmas Spring
Seeps
Hunters Spring
Salt Creek
Eagle Mountain
Naval Reservation
CHOCOLATE MOUNTAIN AERIAL GUNNERY RANGE
CHOCOLATE MOUNTAINS
4WD
10
195
111
T6S
T7S
T7S
T8S
R9E R10E
R10E R11E
R11E R12E
R12E R13E

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Inaccuracies that are known to exist are noted in parentheses.

1. Inventory Phase: Comments received pointed out the popularity of the area to recreational vehicle users and the overall high natural value of much of the area. They also questioned the deletion of the extreme eastern end of the roadless area.

2. Study Phase: Of the 71 comments received in response to this WSA, 41 recommended multiple use designation of the area or a considerable reduction in the size of the WSA. Most of these felt that the area's highest value was for recreation which required vehicle access. Cultural values, pleasant year-round climate, wildlife refuges, and scenic vistas provided outstanding opportunities for driving pleasure, rockhounding, photography, hiking, and other activities for which at least initial vehicle access was needed and had been used extensively in the past. A lack of water in the area would make family recreation impossible under wilderness management. The central area, the Mecca Hills in the southwest portion, and the jeep trail to the Grotto and Hidden Springs in the northwest corner were noted as requiring access.

   Other multiple use concerns included the following: mining potential in the Orocopia Mountains; geothermal potential in the western third of the area which should be explored and developed; and, provision for the Palo Verde-Devers transmission line. Sights and sounds which detract from wilderness quality include: noise from the Chocolate Mountain Bombing Range and from low level, high speed overflights of aircraft from the Marine Corps Air Station at Yuma, Coachella Canal, Bradshaw Stage Road, Kaiser Industrial Railroad, energy transmission lines, and Interstate Highway 10. Some who responded noted that private land holdings in the area negate the legality of wilderness according to FLPMA (Section 603) provisions.

   Wilderness proponents added the following natural values to those mentioned by multiple use proponents: bighorn sheep habitat, scenic rock spires in the northeast section, and historical mining sites, inactive since the 1880's. They noted the educational opportunities provided by the presence of the San Andreas fault, the unique conjunction of five geological terrains, and the transition here from Colorado Desert to Mojave Desert. Also noted were the accessibility to the interior provided by perimeter roads and hiking trails, in particular, the primitive trail off of State Route 195.

Suggestions were made to acquire private land holdings in the central portion, south and east to the railroad tracks, to increase management effectiveness. The inclusion of the northeastern section as a buffer zone was urged. One suggested that the entire WSA was suitable for wilderness because of its solitude and recreational qualities. A suggestion was made to allow limited scientific access to Hidden Spring. High research values and the need for protection from vehicle damage may warrant a special designation.

Twenty-nine comments were received in response to the Public Input Workbook (3/15/79). Twenty-seven recommended wilderness designation. Most of these urged that the area be expanded to include the entire original roadless area, that private lands be acquired, and that unique and diverse wildlife and plants be protected. One respondent thought that access roads should be maintained for the safety of visitors in this extremely dry area. Another wanted to drop the area from wilderness consideration because of traditional uses.

3. Draft Plan Alternatives: The National Outdoor Coalition, a coalition of mining, rockhounding and OHV groups, recommended that the area be designated for intensive use, or opened to motorized vehicles. Conservationists, led by the Sierra Club, proposed wilderness for the entire WSA. Thousands of organization members sent in letters, postcards and coupons supporting these points of view.

   The Coachella Valley Association of Governments, a planning group representing the incorporated cities of the Coachella Valley, endorsed wilderness for the area. The Marine Air Corps Base at Yuma warned of low level, high speed aircraft overflights.

4. Proposed Plan: The Sierra Club recommended extension of the Joshua Tree National Monument and a major new Cahuilla Unit to include the Mecca Hills, Orocopia Mountains and Chuckwalla Mountains. Many letters were received supporting this proposal.

   No comments were received from local governments.

APPENDIX 1
ESTIMATED COSTS OF ACQUISITION OF NON-FEDERAL HOLDINGS WITHIN AREAS RECOMMENDED FOR DESIGNATION
OROCOPIA MOUNTAINS WSA (CDCA-344)

PARCEL No.	LEGAL DESCRIPTION TWNSHP	RNG	SEC	MERIDIAN	TOTAL ACREAGE	NUMBER OF OWNERS	TYPE OF OWNERSHIP BY ESTATE SURFACE ESTATE	SUBSURFACE ESTATE	PRESENTLY PROPOSED FOR ACQUISITION	PREFERRED METHOD OF ACQUISITION	ESTIMATED COST OF ACQUISITION LAND COSTS ($1000)	PROCESSING COSTS ($1000)
1	6S.	11E.	31	SBM	*(560)	13	PRIVATE	PRIVATE	YES	PURCHASE	(56.0)	(32.5)
2	6S.	11E.	33	SBM	160	1	PRIVATE	PRIVATE	YES	PURCHASE	16.0	2.5
3	6S.	11E.	33	SBM	160	1	PRIVATE	PRIVATE	YES	PURCHASE	16.0	2.5
4	6S.	11E.	33	SBM	160	1	PRIVATE	PRIVATE	YES	PURCHASE	16.0	2.5
5	6S.	11E.	33	SBM	160	1	PRIVATE	PRIVATE	YES	PURCHASE	16.0	2.5
6	6S.	11E.	35	SBM	160	1	PRIVATE	PRIVATE	YES	PURCHASE	16.0	2.5
7	6S.	11E.	35	SBM	160	1	PRIVATE	PRIVATE	YES	PURCHASE	16.0	2.5
8	6S.	11E.	35	SBM	160	1	PRIVATE	PRIVATE	YES	PURCHASE	16.0	2.5
9	6S.	11E.	35	SBM	160	1	PRIVATE	PRIVATE	YES	PURCHASE	16.0	2.5
10	6S.	11E.	36	SBM	360	1	STATE	STATE	YES	EXCHANGE	0.0	4.0
11	6S.	12E.	27	SBM	360	1	FEDERAL	PRIVATE	YES	PURCHASE	9.0	0.85
12	6S.	12E.	31	SBM	(240)	6	PRIVATE	PRIVATE	YES	PURCHASE	(24.0)	(15.0)
13	6S.	12E.	33	SBM	*(640)	16	PRIVATE	PRIVATE	YES	PURCHASE	(64.0)	(40.0)
14	6S.	12E.	36	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
15	6S.	13E.	31	SBM	*(640)	34	PRIVATE	PRIVATE	YES	PURCHASE	(64.0)	85.0
16	7S.	11E.	16	SBM	320	1	PRIVATE	PRIVATE	YES	PURCHASE	32.0	2.5
17	7S.	12E.	5	SBM	640	1	PRIVATE	PRIVATE	YES	PURCHASE	64.0	2.5
18	7S.	12E.	7	SBM	(640)	9	PRIVATE	PRIVATE	YES	PURCHASE	(64.0)	(22.5)
19	7S.	12E.	9	SBM	*(640)	8	PRIVATE	PRIVATE	YES	PURCHASE	(64.0)	(20.0)
20	7S.	12E.	16	SBM	640	1	STATE	STATE	YES	EXCHANGE	0.0	4.0
21	7S.	12E.	17	SBM	(640)	10	PRIVATE	PRIVATE	YES	PURCHASE	(64.0)	(25.0)
22	7S.	12E.	19	SBM	160	1	PRIVATE	PRIVATE	YES	PURCHASE	16.0	2.5
23	7S.	12E.	19	SBM	160	1	PRIVATE	PRIVATE	YES	PURCHASE	16.0	2.5
24	7S.	12E.	19	SBM	160	1	PRIVATE	PRIVATE	YES	PURCHASE	16.0	2.5
25	7S.	12E.	19	SBM	160	1	PRIVATE	PRIVATE	YES	PURCHASE	16.0	2.5
26	7S.	12E.	21	SBM	(640)	18	PRIVATE	PRIVATE	YES	PURCHASE	(64.0)	(45.0)
27	7S.	12E.	29	SBM	(480)	22	PRIVATE	PRIVATE	YES	PURCHASE	(48.0)	(55.0)
28	7S.	13E.	7	SBM	634	1	FEDERAL	PRIVATE	YES	PURCHASE	16.0	0.85

* Indicates that exact parcel acreage is unknown. Total acreage for all parcels in a particular section are shown in ( ).

These figures were derived from Bureau Land Records and provide for more detail than GIS estimates and therefore may differ from acreage summaries in Table 1.

Chuckwalla Mountains

CDCA 348

CHUCKWALLA MOUNTAINS WILDERNESS STUDY AREA (WSA)

(CDCA-348)

1. THE STUDY AREA --- 159,229 acres

The Chuckwalla Mountains WSA is located in east central Riverside County, in the southern portion of the California Desert Conservation Area (CDCA). The Chuckwalla Mountains, which are the dominant visual feature within the study area boundaries, are located approximately 40 miles west of Blythe. The WSA includes 146,009 acres of BLM lands, 8,024 acres of State lands and privately owned inholdings totalling 5,196 acres. There are no split estate lands within the WSA boundary (see Map 1 and Table 1).

The WSA boundary to the north follows the mountain-valley interface, south of both Interstate ten and Ford Dry Lake Road. To the west, the boundary follows a north-south trending gas line right-of-way, excluding roads in the Red Cloud Mine area, then departs from the right-of-way to follow the base of the foothills. The southern boundary follows the Bradshaw Trail; and the eastern boundary follows Graham Pass Road to Chuckwalla Springs Road, then trends northwest across the bajada, excluding several disturbed areas within the WSA.

This broad study area includes the Chuckwalla Mountains, portions of the Chuckwalla Bench in the south and Chuckwalla Valley in the northeast. As with most of the larger mountain masses within the CDCA, the Chuckwalla Mountains rise abruptly, as an island from the vast sea of sand and rock. Included within the walls of this rock fortress, are an infinite variety of landform, spatial features, textures and colors. Steep-walled canyons, inland valleys, large and small washes, isolated rock outcrops and vast expanses of desert pavement interact with each other and with the other resources and elements to form a constantly changing panorama. Elevation varies widely from the low-lying bajada at 800' elevation to the area's highest peak, Black Butte, reaching up to 4,450 feet.

The diverse topography of these areas support an equally diverse plant and wildlife community. Ocotillo, cholla, yucca, creosote, barrel cactus and nolina are scattered throughout. Iron tree washes lace the surface and support many types of wildlife. Bighorn sheep, burro deer, desert tortoise, raptors, snakes, coyotes and fox are just a few of the many creatures that make their home here.

Approximately 15% of the Chuckwalla Mountains WSA is overlapped by the Chuckwalla Bench Area of Critical Environmental Concern (ACEC). This area contains important habitat for desert tortoise, a BLM sensitive species. Also, within the northeastern cherrystemmed area lies Corn Springs ACEC, designated in recognition of its outstanding cultural resources and recreation potential. Both these ACEC's were designated in the CDCA Plan, finalized in 1980.

This WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EIS) for the CDCA Plan: protection, use, balanced and no action, and a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

60,073	acres recommended for wilderness
88,979	BLM acres recommended for nonwilderness

Partial wilderness (38% suitable) is the recommendation for this WSA. The remaining 88,979 acres in this WSA are released for uses other than wilderness. In addition to the Federal acreage recommended for wilderness, BLM recommends that 2894 acres of State land and 149 acres of private land be acquired through exchange or purchase and designated as wilderness. With acquisition of these inholdings, a total of 60,073 acres are recommended for wilderness. Appendix 1 lists all inholdings and provides additional information on their acquisition. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

Two separate sections within the WSA are recommended suitable as shown on the Chuckwalla Mountains WSA Map. These sections constitute the most rugged, inaccessible portions of the Chuckwalla Mountains. For clarity, throughout the rest of the report, should the two areas need to be distinguished, the northern suitable section will be referred to as Segment A and the southern area as Segment B. Because of their similarities in landform, ecosystems and wilderness values, however, more often they will be referenced together as simply the suitable areas.

These areas are recommended suitable because they possess outstanding wilderness values and because of the many special features found within. Because of these important factors, preservation of these areas as wilderness outweighs any alternative uses of the area.

The portions of the Chuckwalla Mountains being recommended for designation possess exceptional opportunities for primitive recreational experiences and solitude in a setting of unsurpassed naturalness. Rich in historical, biological, and geological values, this area offers camping, hunting, rockhunting, sightseeing, photography and many other activities. Although extremely rugged in appearance, the Chuckwalla Mountains include many interior valleys, gently sloping bajadas and washes in addition to an intricate pattern of canyons that can be easily traveled on foot. An infinite number of wilderness experiences await the recreationist. The Chuckwalla Mountain WSA will provide many opportunities for challenging outdoor experiences to future enthusiasts. Because of the acknowledged versatility of the area, it was designated as part of the "Recreation Lands of the California Desert" by the Secretary of Interior in May, 1972.

Surrounded by the suitable areas but not included within, is the Corn Springs Campground. This BLM facility is heavily used throughout the winter, providing a staging area for excursions into either suitable segment. From this developed campground, wilderness opportunities for activities such as day hiking are excellent.

Within these pristine interior reaches, naturalness has been preserved, protected by inaccessible terrain. Few imprints of man are visible. Those that exist such as wildlife guzzlers, are shielded from view, and thus, are virtually imperceptible. The same terrain that sustains the mountains' naturalness provides countless opportunities for solitude. Rough, boulderstrewn hillsides and washes, thick with vegetation, allow ample opportunities for visitors to enjoy seclusion.

A variety of special features are present within the suitable areas. They include sensitive plant species, a population of desert bighorn sheep, prairie falcon eyries and areas of cultural resource significance/sensitivity. A more detailed discussion of special features is given in the Wilderness Characteristics Section.

Within the suitable areas, wilderness values conflict with mineral resource values. Designation would constrain mineral exploration and development within these areas. Seventy-three (73) mining claims currently exist within these suitable portions. These conflicts are most significant near the Red Cloud Mine and the Corn Springs areas where many mining claims are located. The most heavily disturbed portions of these locations have been excluded from the suitable areas or the WSA altogether. Nevertheless, areas with high mineral potential for gold, molybdenum and tungsten are included in the suitable boundary. In the decision making process, this conflict was noted. However, it was determined that the suitable areas' wilderness values outweighed the value of these mineral resources. Because wilderness values are so significant, the suitability recommendation will preclude any further vehicular use of approximately 35 miles of primitive access routes of travel.

The majority of the Chuckwalla Mountains WSA is recommended nonsuitable because: (1) the wilderness qualities only marginally satisfied the Section 2(c) criteria outlined in the 1964 Wilderness Act; (2) much of the area has high and moderate potential for mineral resource occurrence; and (3) the area has traditionally received widespread use by recreationists utilizing motorized vehicles.

Within the nonsuitable area, wilderness values, particularly naturalness, are marginal. This portion of the WSA is more accessible and therefore has endured more manipulation by man. The mountainous areas of the nonsuitable portion have been prospected extensively. The area's high mineral potential as shown in the recently completed mineral reports has been known for years by desert prospectors in search of mineral wealth. Countless trenches, adits, and holes are scattered throughout these mountains. Though most have become inconspicuous over the passage of time, their cumulative effect acts to significantly reduce the area's naturalness.

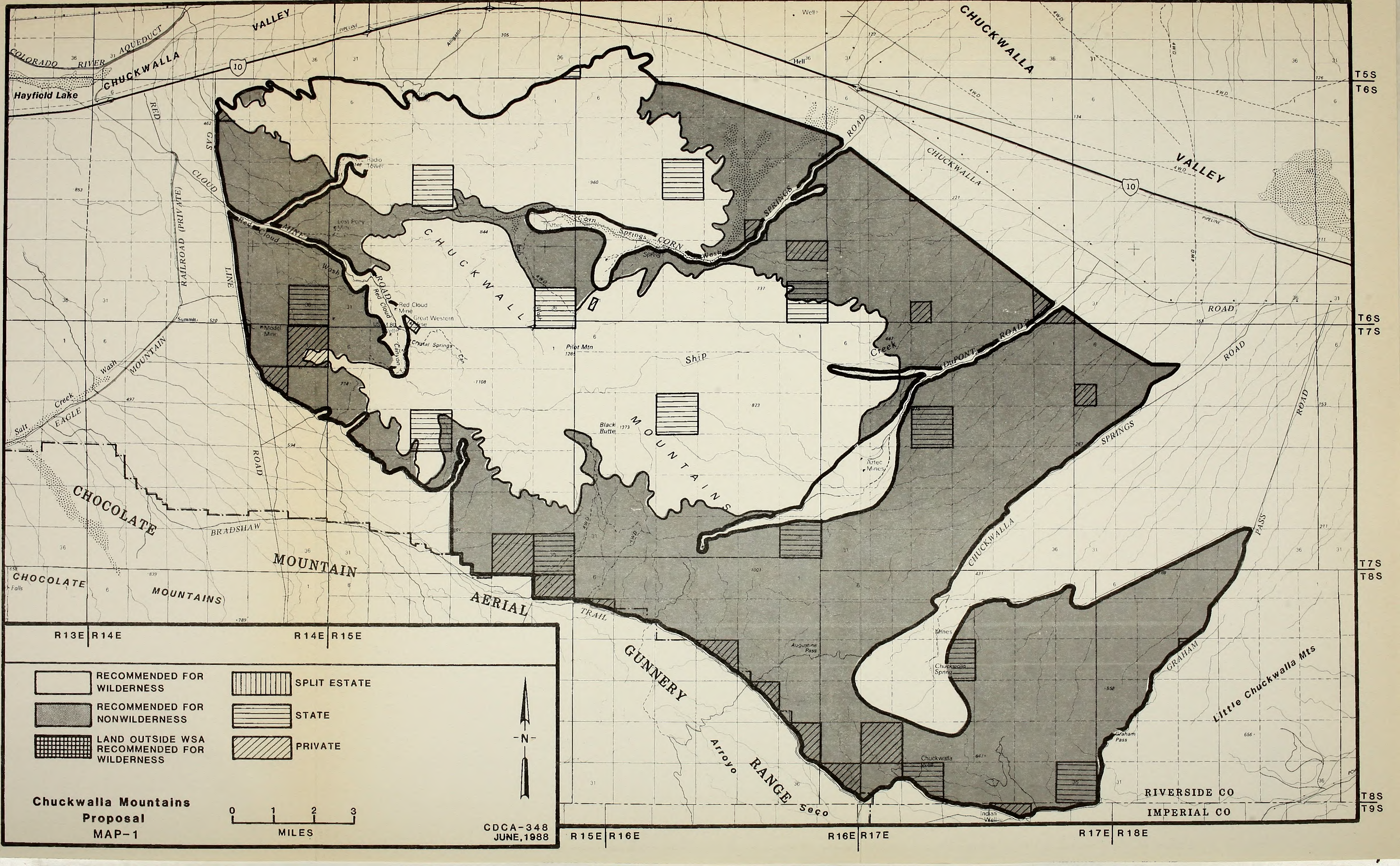
South of the Bradshaw Trail, the road forming the WSA's southern boundary, lies the Chocolate Mountains Aerial Gunnery Range, an area administered by the military and used for bombing practice and maneuvers. Almost daily, military jets fly over the Chocolate Mountains dropping huge bombs on the targets below. The startling noise of jets tearing through the mountain passes and the ensuing explosions, upset the usual peacefulness of the area, thereby affecting opportunities for solitude. This disturbance is most apparent in the southern portion of the WSA. The maze-like topography damps out the noise before reaching the WSA's suitable areas. The intrusions from the Gunnery Range were frequently noted in public comments which supported a nonsuitable recommendation for this portion of the WSA.

Much of the nonsuitable area has traditionally supported a wide variety of vehicle dependent recreational activities. A network of primitive ways, punctuated by occasional hill climbs, threads through these mountains. Vehicle touring is an increasingly popular activity in this area. Enjoyed by many part time enthusiasts, serious four-wheel drive club groups as well as outdoor oriented families, this activity accounts for the majority of recreation use in the Chuckwalla Mountains. There are approximately 45 miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use.

Another popular recreational pastime in the Chuckwalla's is rockhounding. Within the nonsuitable area, there are excellent rockhounding opportunities for calcite, chalcedony, geodes, jasper, and petrified wood. Concern for the loss of this activity also generated public response and is so reflected in the public comments received for this WSA.

A large portion of the nonsuitable area possess high to moderate potential for mineral resource occurrence. These mineral resources include deposits of gold, silver, tungsten and molybdenum. Access to these mineralized areas for exploration and development would remain open under the management guidelines identified for this area.

This nonsuitable area is not entirely devoid of interesting features. Surrounding the mountains, alluvial fans formed by centuries of erosion, join to form broad aprons which slope gradually downward in sweeping curves. The surface of these bajadas are laced with a network of washes which form an intricate pattern of sand and vegetation. These washes support burro and mule deer and a variety of both resident and migratory birds. The bajada located south of the Chuckwalla Mountains is known as the Chuckwalla Bench. This area was designated an ACEC because of its outstanding wildlife habitat. Here, desert tortoise densities can reach up to 150 animals per square mile. One unusual plant assemblage, munz cholla, is located on Chuckwalla Bench, near the Bradshaw Trail. Although it is recommended nonsuitable, stringent management guidelines as outlined in the Chuckwalla Bench ACEC Plan (1986), will preserve the special features of the area while providing for a limited measure of multiple uses.



Chuckwalla Mountains Proposal
MAP-1

CDCA-348
JUNE, 1988

RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0 1 2 3
MILES
R13E R14E
R14E R15E
R15E R16E
R16E R17E
R17E R18E
T5S
T6S
T7S
T8S
T9S
CHUCKWALLA VALLEY
COLORADO RIVER AQUEDUCT
Hayfield Lake
10
PIPELINE
Hell
Well
4WD
RED CLOUD MINE ROAD
GAS LINE ROAD
RAILROAD (PRIVATE)
Summit
Radio Tower
Lost Pony Mine
Red Cloud Wash
Red Cloud Mine
Great Western Mine
Red Cloud Canyon
Crystal Springs
Model Mine
CHUCKWALLA MOUNTAINS
Pilot Mtn
Ship Creek
Black Butte
Aztec
Corn Springs
CORN SPRINGS Wash
Spring
CORN SPRINGS ROAD
CHUCKWALLA ROAD
DUPONT ROAD
Aztec Mines
CHUCKWALLA SPRINGS
Salt Creek Wash
EAGLE MOUNTAIN ROAD
CHOCOLATE MOUNTAIN
BRADSHAW TRAIL
CHOCOLATE MOUNTAINS
Falls
MOUNTAIN AERIAL GUNNERY RANGE
Augustine Pass
Mines
Chuckwalla Spring
Chuckwalla Well
Arroyo Seco
Indian Well
GRAHAM PASS ROAD
Graham Pass
Little Chuckwalla Mts
RIVERSIDE CO
IMPERIAL CO

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	146,009
Split Estate	(BLM surface only)	0
Inholdings		
State		8,024
Private		5,196
Total		159,229

Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	57,030
BLM	(outside WSA)	0
Split Estate	(within WSA)[1]	0
Split Estate	(outside WSA)[1]	0
Total BLM Land Recommended for Wilderness		57,030
Inholdings[1]		
State		2,894
Private		149

Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	88,979
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		88,979

---

[1] Appendix 1 is a detailed description of inholdings and split estate tracts included within the study. For purposes of this report, split estate lands are defined only as those lands with Federal surface and non Federal subsurface (minerals). Lands that have Federal minerals but non Federal surface should be classified in this report by the owner of the surface estate.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: Prior to the 1960's, historic use of the Chuckwalla Mountains and the surrounding bajadas was generally restricted to mineral exploration and development. In the suitable areas, a few abandoned mines and access routes exist but these are gradually reverting back to a natural appearance. The area, in general, has more recently attracted recreationists interested in off-highway vehicle use. The mountains are rugged and, for the most part, preclude vehicular use, but the washes support off-highway vehicles of all types. Damage to vegetation in the washes is minimal and the visual impacts of this use is erased following each rain. Overall, the suitable area has maintained its natural condition.

   The nonsuitable area is more accessible and therefore, man has had a greater influence on the land. A history of prospecting has resulted in trenches, adits and primitive ways scattered throughout the area. The cumulative impacts of these intrusions, acts to significantly reduce the nonsuitable area's naturalness.

2. Solitude: Opportunities for solitude vary between locations. In the suitable areas, the rugged landform varies considerably. These areas support a complex network of large and small washes, ridges, canyons and inland valleys. Vegetation of all types and sizes reinforce the surface variation to provide seclusion. In most areas, visitors, even at relatively close range, would be shielded from each other.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: The same features that provide the background for solitude in the suitable area, tend to ensure outstanding opportunities for primitive recreation. The overall ruggedness of the interior Chuckwalla Mountains has precluded the use of vehicles and man-made intrusions, and the area has been left in a natural state. Outstanding opportunities for primitive recreation abound. The area is untrammeled. There are no restrictions which would confine users.

   In the nonsuitable area, opportunities for primitive and unconfined types of recreation are also present. However, in many cases, the imprints of man create constraints that impose a sense of confinement.

4. Special Features: Historically, the Chuckwalla Mountains have supported Native American populations, and they have left their marks throughout the study area. Petroglyphs, aboriginal rock rings, quarry sites and other remains attest to the early presence of these people. One area of high sensitivity/significance is included within the suitable boundary.

   Within the suitable areas a variety of sensitive plants and animals persist. The following BLM sensitive plant species are found here: Alverson's foxtail cactus (Coryphantha vivipara var. alversonii), and California ditaxis (Ditaxis californica). Glandular ditaxis (D. adenphora), listed in the California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California, is also located in this area. In the nonsuitable area, one unusual plant assemblage can be found. This feature consists of several large specimens of Munz cholla, the largest cholla in the California Desert and known only from the Chuckwalla Bench and parts of the Chocolate Mountains.

   The varied topography and relative abundance of water within this area, support a diverse faunal assemblage. This area includes areas of permanent and seasonal range for desert bighorn sheep (Ovis canadensis nelsoni), a BLM sensitive species. The bighorn sheep herd in these mountains was estimated at 25 individuals in 1980. These mountains also contain a population of burro deer and at least one prairie falcon aerie. Two big game guzzlers are located within the WSa to provide water for bighorn sheep and deer. The lower mountain slopes contain populations of desert tortoise (Gopherus agassizi), currently identified as a BLM sensitive species, and under consideration for state listing as threatened or endangered. The tortoise is under status review by the U.S. Fish and Wildlife Service for possible listing as a threatened or endangered species.

   The alluvial fan located south of the Chuckwalla Mountains, in the nonsuitable area, is known as the Chuckwalla Bench. This area, well known for dense desert tortoise populations, contains outstanding habitat for a variety of birds, animals and reptiles. Its quality and diversity were distinctive enough to merit designation as an ACEC. This area is protected by stringent guidelines, identified in the Chuckwalla Bench ACEC Plan, completed in 1986.

B. Diversity in the National Wilderness Preservation System

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 41,706 acres of the American Desert/Creosote Bush-bur Sage and 104,303 acres of the American Desert/Palo Verde-Cactus Shrub ecosystem. The variety of landforms and surface variation found in this WSA reflects that of the surrounding mountains, including those in Joshua Tree National Monument which have already been designated wilderness.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas areas	NWPS Areas acres	Other BLM Studies areas	Other BLM Studies acres
		NATIONWIDE		
American Desert/Palo Verde-Cactus Shrub	2	271,403	42	1,441,288
American Desert/Creosote Bush-bur Sage	3	126,033	48	1,530,296
		CALIFORNIA		
American Desert/Palo Verde-Cactus Shrub	0	0	11	489,309
American Desert/Creosote Bush-bur Sage	2	26,427	20	935,835

2. Expanding the opportunities for solitude or primitive recreation within a days driving time (five hours) of major population centers: The WSA is within a five-hour drive of seven major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a five-hour drive of the population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS areas areas	NWPS areas acres	Other BLM Studies areas	Other BLM Studies acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Oxnard-Ventura	23	2,195,198	85	2,703,260
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The WSA is within 50 air miles of 19 BLM WSAs recommended for wilderness designation. The closest designated wilderness areas are Joshua Tree Wilderness Areas, administered by Joshua Tree National Monument, located 15 miles to the northwest. Also within a 50 mile radius is the Santa Rosa Wilderness Area, located in the San Bernardino National Forest and state designated wilderness areas in Anza Borrego Desert State Park.

C. Manageability

The Chuckwalla Mountains WSA is manageable as wilderness. However, management would be complicated by the pressure to develop mineral resources, irregular boundaries, private inholdings, and existing use patterns. These conflicts would be greatest in the nonsuitable portion of the WSA, making management extremely difficult.

Within the suitable areas, there are 73 mining claims. Unless validity examinations could clear all claims, claimants could exercise their valid existing rights to continue with mining activities that are reasonably incidental to their claims. While these activities cannot cause unnecessary or undue degradation, they may cause severe enough impacts to greatly hamper manageability of the area to preserve wilderness values.

Management of the suitable areas would also be hampered by the irregular boundaries of both segments. In general, the boundaries of both areas follow only topographic features which are difficult to locate on the ground. Frequent signing and detailed maps would be required to ensure the integrity of the two areas. Without adequate identification, inadvertent penetration by off-highway vehicles and mineral exploration equipment could result.

The suitable areas surround two small patented mining operations, which combined, cover 110 acres. Both areas are proposed for acquisition (See Appendix 1). If not acquired, large-scale mining activities, which could potentially be developed on these private parcels, could significantly impact naturalness, solitude and primitive and unconfined recreation. Development of these areas could reduce manageability significantly.

The nonsuitable area has the same management problems as the suitable areas. However, in this area, the conflicts are larger in scale. There are more mining claims, more private land, and the boundary would be more difficult to manage. In addition, traditional recreational use patterns involving motorized vehicles would have to be controlled.

As of December 1987, 130 mining claims were located in the nonsuitable portion of the WSA. As with those in the suitable areas, those that retain valid rights have the potential to create manageability problems. Also included within this boundary are 10,177 acres of private and state inholdings that would affect manageability. Acquisition of these private lands would be a costly venture with those wilderness values acquired constituting only minimal benefits.

Although along much of its length, the WSA boundary is marked by easily identifiable features, it is so extensive that it would be difficult to prevent intrusions by motorized vehicles. Extensive signing along the eastern boundary would be required since for many miles, the boundary lines follow no physical features. Mining operations, cherrystemmed out of the WSA, could also generate intrusions of noise, dust and visual impacts.

Control of traditional vehicle dependent recreational use would be another manageability problem. Closure of the area to vehicles would require extensive signing and constant patrol to ensure compliance. Once designated wilderness, an administrative designation will provide for maintenance of the existing big game guzzlers.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Chuckwalla Mountains WSA is in the BLM Chuckwalla Mountains Geology-Energy-Mineral (G-E-M) Resource Area (GRA). G-E-M data in the wilderness portion of the CDCA Plan EIS (Volume B, Appendix III) stated that silver, copper, lead, and gold have been produced from the WSA. The EIS states that zinc, thorium, and tungsten also occur in the WSA. In addition, the EIS states that geochemical studies indicated enormously high concentrations of barium, boron, beryllium, cerium, chromium, cobalt, iron, lanthanum, lithium, manganese, molybdenum, niobium, strontium, tin, titanium, tungsten, vanadium, yttrium, and zirconium which may indicate mineral deposits in the WSA. In 1980, the EIS stated that there were over 100 unpatented mining claims in the WSA.

   Information available in the 1980 GRA files indicates that the area around Red Cloud Mine had a high potential for the occurrence of precious and base metals. The area to the north and west of the Red Cloud Mine had a moderate potential for the occurrence of precious metals. GRA files show that numerous old mines and prospects existed within the WSA. Many of these are concentrated around and near Red Cloud Mine Road and the Corn Springs area. Both of these locations contain patented mining claims that have been excluded from the WSA.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should Be Considered in the Final Recommendation: A mineral survey of the suitable portion of the WSA was conducted by the U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (BOM) during the period between 1981 and 1983. The joint open file report (OFR 84-674) was completed by USGS and BOM in 1984. The BOM published their investigation of mines and mineral properties in Mineral Land Assessment Report MLA 4-85 in 1984. For these studies, USGS took about 400 random stream sediment samples, and BOM took 712 samples from selected mineral properties in the recommended suitable portion of the WSA.

   OFR 84-674 found, through geologic and geochemical investigations and a survey of mines and prospects, that those parts of the western portion of the Chuckwalla Mountains WSA that are intruded by altered mafic dikes associated with quartz veins and shear zones have a moderate or high potential for the occurrence of undiscovered gold, silver and tungsten deposits. This classification expands the potential classification in the 1980 GRA and is reflected on Map 2. High stream-sediment concentrations of molybdenum strongly suggested in the report, that parts of those areas intruded by the dikes also contain molybdenum-bearing minerals and thus, have moderate or high potential for the occurrence of molybdenum resources. The 1980 GRA did not classify the WSA for molybdenum resources. This data is a new change from the 1980 G-E-M classification. All areas with moderate or high potential for gold, silver, tungsten, or molybdenum resources also have low potential for the occurrence of associated copper and lead. Low potential for the occurrence of tin and thorium resources exists in the north part of the WSA. Sand, gravel, and stone suitable for construction materials are found in the study area but were not classified by the USGS and BOM.

   On Map 2 it can be seen that the western portion of the WSA includes highly complex areas of high and moderate potential for the occurrence of gold, silver, tungsten, and molybdenum resources.

   Between 1980 and December 1987 mining interests have continued to explore and evaluate areas near Red Cloud, Corn Springs, Aztec Well and the western boundary of the WSA. Numerous mining plans have been filed for both the suitable and nonsuitable areas with the BLM. High interest has been shown in the alluvial deposits of the northeast and eastern portions of the WSA and the area around Aztec Well and Chuckwalla Springs. A heap leach operation at Chuckwalla Springs has received state permits and BLM approval of the mining plan is anticipated in early 1988. Unpatented mining claims located in the WSA are summarized in the following table taken from BLM records dated December, 1987.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	55	84	139	1,100	1,680	2,780
Placer	17	45	62	680	1,800	2,480
Mill Sites	1	1	2	5	5	10
Total	73	130	203	1,785	3,485	5,270

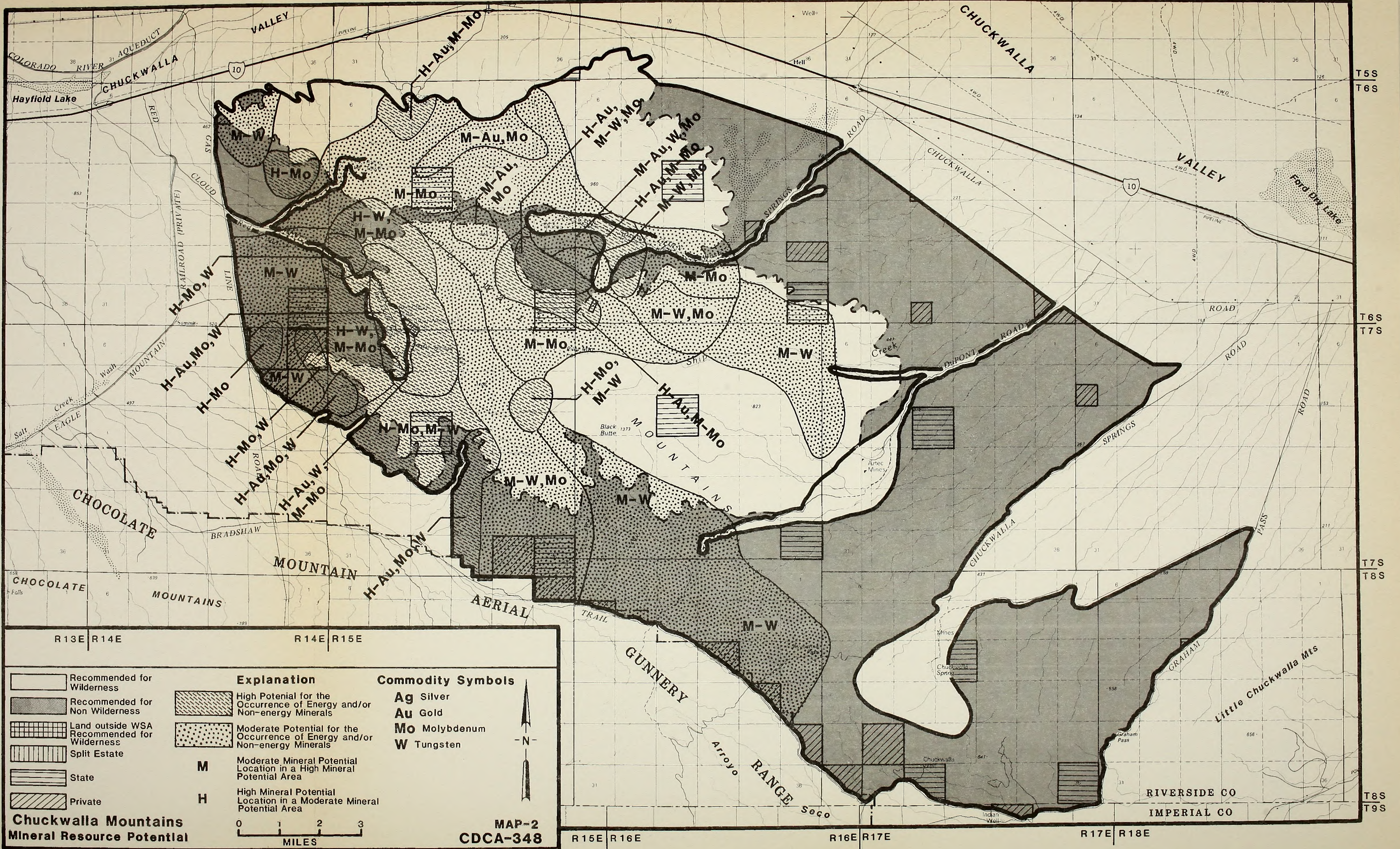
E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: In the suitable portion of the WSA, wilderness values will be maintained. In the nonsuitable areas, adverse impacts to wilderness values will occur. Mineral exploration and development will cause localized adverse impacts to naturalness in the mineralized areas consisting of approximately 25% of the entire WSA. Vehicle use, associated with both access and recreation, will effect solitude and primitive and unconfined types of recreation along roughly 15 miles of designated routes of travel which will remain open. Solitude over most of the southern portion of the WSA will be affected by continued military overflights.

2. Impacts on Locatable Mineral Exploration and Development: In the suitable portion of the WSA, locatable mineral exploration and development will suffer significant adverse impacts. In the nonsuitable area, mineral exploration and development will be allowed to continue subject to the regulations set forth in 43 CFR 3809 regarding surface disturbance as well as any additional constraints as listed in the CDCA Plan.

3. Impacts on Vehicle-dependent Recreation Opportunities: In the suitable areas, these opportunities will be significantly curtailed by restrictions placed on vehicle entry. In the nonsuitable portion of the WSA, these activities will be allowed to continue. Approximately 15 miles of designated routes of travel will remain open.

4. Impacts on Bighorn Sheep/Habitat: That portion of bighorn habitat located in the suitable areas will be maintained by designation. In the nonsuitable area, adverse impacts are expected in localized areas as a result of noise and surface disturbance from potential mining activities. Administrative designations will be made to provide for maintenance of the existing big game guzzlers. However, the location of additional guzzlers to expand the bighorn population will be constrained by restrictions on mechanized equipment and vehicle access.


CHUCKWALLA VALLEY
COLORADO RIVER AQUEDUCT
Hayfield Lake
CHUCKWALLA VALLEY
Ford Dry Lake
RED CLOUD
RAILROAD (PRIVATE)
GAS LINE
Salt Creek Wash
EAGLE MOUNTAIN ROAD
CHOCOLATE MOUNTAIN AERIAL GUNNERY RANGE
BRADSHAW TRAIL
CHOCOLATE MOUNTAINS
CHUCKWALLA MOUNTAINS
Black Butte
Aztec Mines
Chuckwalla Spring
Graham Pass
Indian Well
Arroyo Seco
SPRINGS ROAD
DUPONT ROAD
CHUCKWALLA SPRINGS
GRAHAM PASS ROAD
Little Chuckwalla Mts
RIVERSIDE CO
IMPERIAL CO
T5S
T6S
T7S
T8S
T9S
R13E R14E
R14E R15E
R15E R16E
R16E R17E
R17E R18E
H-Au,M-Mo
M-W
H-Mo
M-Au,Mo
H-Au, M-W,Mo
M-Au,W,Mo
H-Au,M-Mo
M-W,Mo
M-Mo
M-Au, Mo
H-W, M-Mo
H-Mo,W
M-W
H-Au,Mo,W
H-W, M-Mo
H-Mo
M-W
H-Mo,W
H-Au,Mo,W
H-Au,W, M-Mo
H-Mo,M-W
M-Mo
M-W,Mo
M-W
H-Mo, M-W
H-Au,M-Mo
M-W,Mo
M-W
H-Au,Mo,W
M-W
Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potential for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
Ag Silver
Au Gold
Mo Molybdenum
W Tungsten
N
0 1 2 3
MILES

Chuckwalla Mountains
Mineral Resource Potential

MAP-2
CDCA-348

5. Impacts on Desert Tortoise/Habitat: Impacts on desert tortoise will be minor, consisting of localized habitat loss caused by development ancillary to mineral extraction and occasional disturbances of individual animals by human intrusion. Impacts are not more severe because tortoise habitat and areas of potential mineral development do not coincide. State laws and management guidelines outlined in the Chuckwalla Bench ACEC Plan provide some protection for this species and it's habitat.

6. Impacts on Sensitive Plant Species/Habitat: Those species whose habitats coincide with the suitable areas will gain some additional protection. In the nonsuitable area, localized impacts caused by mineral exploration and development and vehicle use in designated washes will adversely affect these species' habitats. However, total habitat loss attributable to these activities will be less than one percent of the suitable habitat in the WSA. Management guidelines listed in the CDCA Plan, Chuckwalla Bench ACEC Plan, and Chuckwalla Mountains Habitat Management Plan adequately protect these sensitive species throughout the WSA.

7. Impacts on Cultural Resources: The proposed action will not affect the one area of cultural significance in the WSA. This area, in the suitable portion of the WSA, has been protected in the past by inaccessible terrain, stringent management guidelines, and Federal law. Designation will have an adverse effect on study of this site by curtailing vehicle access.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the Final CDCA Plan and EIS. Therefore, no further discussion of this topic will occur this document.

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Inaccuracies that are known to exist are noted in parentheses.

1. Inventory Phase: The majority of comments addressing inventory criteria mentioned the effects of man. Other comments stated that the present boundaries were good. The area was reevaluated, and changes were made where appropriate. Other comments address the study phase.

2. Study Phase: Approximately 65 comments addressed this WSA. Twenty-three favored wilderness designation for this area. Thirty preferred multiple use management because motorized access was essential, usually for rockhounding, or mineral exploration, or because they felt the area did not meet wilderness requirements. The remainder of the letters mentioned factors which detracted from wilderness values in certain portions of the area, only.

   A major argument against wilderness classification was the popularity of the region for rockhounding. Iris agate, jasper, and chalcedony were mentioned as minerals found there. The area is referred to in Strong's Desert Gem Trails. Minerals present in the area were said to include gold, silver, and tungsten. Oil and gas and geothermal resources were also reported to be present.

   Other popular recreation activities requiring the use of motorized vehicles included deer hunting, camping, photography, driving for pleasure, mine exploration and four-wheel driving. The area provides opportunities for advanced motorized vehicle users and is popular with Blythe OHV recreationists. A route up Augustine Pass and a corridor from Corn Springs to Red Cloud Mine were mentioned as scenic routes which should be kept open.

   Several people who commented noted the extreme noise produced by bombing on the nearby Chocolate Mountains Gunnery Range. Its impact throughout the entire region was felt to nullify wilderness qualities for up to 20 miles from the range's border--it has "driven all wildlife in the area out." The railroad, transmission lines, pipelines, radio towers, pumping stations, and the Interstate freeway (all located outside the WSA) were also listed as intrusions on qualities of solitude and naturalness.

   One respondent noted that the area contains less than 5,000 acres when private lands are excluded and thus should not be considered for further study (not true). According to another comment, the area's flora and fauna are not unique. It was suggested that since the eastern half of this WSA is similar to the Little Chuckwalla WSA (CDCA-350), it could be considered for deletion from this WSA.

   Supporters of wilderness designation value the "vivid primeval character" and the scenic and topographical diversity. The Chuckwalla Bench was considered a high priority area, with its overlap of desert terrains and indigenous wildlife. Corn Springs was mentioned as deserving protection for its support of native wildlife. *Coryphantha vivipara* and California Ditaxis, as well as a rich variety of spring annuals, reptiles, and bighorn sheep and their habitats are found in this diverse region. Archaeological values mentioned include Native American trails. Good opportunities for scientific research were said to exist here. Primitive recreation activities which are popular here are hiking, photography, backpacking, and nature study. Many springs provide water for extended stays.

Several comments were received in response to the Public Input Workbook (3/15/79). The majority of comments recommended that the area be left open for rockhounding, which they considered to the primary existing use in the area. Other respondents urged wilderness designation because the area is an important transition zone between the Colorado and Mojave Deserts.

3. Draft Plan Alternatives: A variety of public comments specific to this WSA were received in response to the Draft Desert Plan Alternatives. Some agreed with the Protection Alternative, and others agreed with the Balanced or Use alternatives. Several respondents wanted more wilderness than was recommended in the Protection Alternative, while others favored designating only the mountainous portions as wilderness. General comments included the desire to retain existing vehicle access routes for rockhounds and to allow exploration for and development of oil, gas, and geothermal resources.

   The National Outdoor Coalition (NOC), a coalition of mining, rockhounding, and ORV groups, recommended medium use, for the entire area. In contrast, the Sierra Club favored designating the entire WSA as wilderness. Thousands of members of these organizations sent in letters and coupons supporting these positions.

   The Marine Air Corps Base in Yuma commented that low level, high speed air routes cross this WSA and should be considered. The California Department of Transportation wanted assurance that they would have access to sand and gravel sites located on the northern edge of the WSA.

4. Proposed Plan: Hundreds of members of conservation groups requested wilderness designation of the entire area recommended as wilderness in the Protection Alternative of the Draft Plan. Many of these respondents also urged protection of the Corn Springs area. They proposed removal of public campgrounds and closure of the Corn Springs Wash vehicle corridor. These positions were also taken by the California State Resources Agency.

   Protection of the desert tortoise in the Chuckwalla Bench area was a major concern of many respondents.

   Several respondents, particularly rockhounds, requested that the area not be closed to ORVs and to vehicle-oriented recreation.

   No comments were received from local governments.

5. 1982 Plan Amendments: An amendment was proposed and adopted to change the multiple use classification of public lands in the Red Cloud Mine area, consisting of 8,450 acres, from limited use to medium use. The rationale was that this area has many routes of travel and much past and present mining activity. Most of the area is within the western portion of WSA 348 which was recommended nonsuitable.

Thirty-nine respondents commented on the Draft Environmental Impact Statement on this amendment, 32 opposed and seven in favor. The major reason for opposition was the fear that increased vehicle and mining activities would have deleterious effects on the crucial desert tortoise habitat in the Chuckwalla Bench ACEC. The State Department of Fish and Game objected because of potential impacts on the tortoise, the Burro Deer, and the Desert Bighorn Sheep.

Only one supporting reason was given for favoring the amendment. The State Lands Commission commented that the State of California may benefit since it owns some land or mineral rights within the subject area.

Eight respondents commented on the Final EIS, one in favor and seven opposed. The National Audubon Society and several individuals expressed the same concern for wildlife described for the Draft EIS. The one letter in favor gave no reason.

APPENDIX 1
ESTIMATED COSTS OF ACQUISITION OF NON-FEDERAL HOLDINGS WITHIN AREAS RECOMMENDED FOR DESIGNATION
CHUCKWALLA MOUNTAINS WSA (CDCA-348)

PARCEL No.	LEGAL DESCRIPTION TWNSHP	RNG	SEC	MERIDIAN	TOTAL ACREAGE	NUMBER OF OWNERS	TYPE OF OWNERSHIP BY ESTATE SURFACE ESTATE	SUBSURFACE ESTATE	PRESENTLY PROPOSED FOR ACQUISITION	PREFERRED METHOD OF ACQUISITION	ESTIMATED COST OF ACQUISITION LAND COSTS ($1000)	PROCESSING COSTS ($1000)
1	6S.	15E.	32	SBM	70	1	PRIVATE	PRIVATE	YES	PURCHASE	7.0	7.5
2	6S.	16E.	31	SBM	20	1	PRIVATE	PRIVATE	YES	PURCHASE	2.0	2.5
3	6S.	16E.	31	SBM	20	1	PRIVATE	PRIVATE	YES	PURCHASE	2.0	2.5
4	7S.	15E.	16	SBM	520	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
5	6S.	15E.	16	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
6	6S.	15E.	16	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
7	6S.	15E.	36	SBM	480	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
8	7S.	16E.	16	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
9	5S.	15E.	36	SBM	40	1	STATE	STATE	YES	EXCHANGE	N/A	4.0

These figures were derived from Bureau Land Records and provide for more detail than GIS estimates and therefore may differ from acreage summaries in Table 1.

Little Chuckwalla Mountains

CDCA 350

LITTLE CHUCKWALLA MOUNTAINS WILDERNESS STUDY AREA (WSA)

(CDCA-350)

1. THE STUDY AREA --- 47,583 acres

The Little Chuckwalla Mountains WSA spans the common boundary of Riverside and Imperial Counties in the southern portion of the California Desert Conservation Area (CDCA). This WSA is situated approximately 25 miles southwest of Blythe, California. The WSA includes 44,889 acres of public land under the jurisdiction of the Bureau of Land Management (BLM), 546 acres of State land and 2,148 private inholdings. There are no split estate lands within the WSA boundary (see Map 1 and Table 1).

From the southwest corner, the boundary proceeds east along the Bradshaw Trail, excluding an area of surface disturbance, until it meets Wiley Well Road. The eastern boundary follows this north-south trending road approximately five miles. The northern boundary is a straight line from Wiley Well Road to an unnamed wash which identifies the western boundary. The boundary proceeds along the wash in a southwesterly direction until it meets the base of the Little Chuckwalla Mountains. It then follows this topographic feature until it intersects Graham Pass Road, which it then follows back to the Bradshaw Trail.

Rugged mountains surrounded by a large, gently sloping bajada laced with a network of washes describes the WSA's terrain and landforms. The elevation within the WSA varies between 400 feet on the bajada to the north, to over 2100 feet along the rugged crest. Vegetation here is sparse, characterized by creosote bush and bur sage.

Approximately ten percent of the Little Chuckwalla Mountains WSA is overlapped by the Chuckwalla Bench Area of Critical Environmental Concern (ACEC). This ACEC, designated in 1980 by the CDCA Plan contains important wildlife habitat.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EIS) for the CDCA Plan: protection, use, balanced, and no action; a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

0	acres recommended for wilderness
44,889	BLM acres recommended for nonwilderness

No wilderness is the recommendation for this WSA. The entire acreage in this WSA is released for uses other than wilderness. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balance Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The WSA is recommended as nonsuitable for wilderness designation because its mineral resource potential and motorized recreational opportunities outweigh the area's marginal wilderness values. Although the area possesses wilderness values that adequately satisfied the criteria set forth in Section 2(c) of the 1964 Wilderness Act, they are not distinctive enough to override the area's potential for other uses nor warrant inclusion into the National Wilderness Preservation System (NWPS).

The Little Chuckwalla Mountains have areas of high potential for perlite, a lightweight aggregate used in manufacturing concrete and plaster. This resource has proven reserves of over 380,000 tons. Along Graham Pass, there is an area that has geochemical evidence for the occurrence of rare earths. This same area has moderate potential for gold. Another area, south of Graham Pass has moderate potential for chromium. The extreme northern portion of the WSA is included within the Ford Dry Lake Known Geothermal Resource Area and has moderate potential for geothermal resources.

Recreational use of the area is dependent upon the use of motorized vehicles. This highly mineralized area has long attracted rockhounds, who collect such minerals as chalcedony, moss plume agate, selenite, banded agate, iris agate, jasper, calcite geodes and petrified wood. Because of the remoteness of the prime rockhounding areas and the ruggedness of the terrain, access for this activity requires the use of a motorized vehicle. This WSA is located adjacent to the Mule Mountains Long-term Visitor Area (LTVA). This area is used by campers, most of whom are retired senior citizens, for stays of up to eight months. Due to this proximity, the majority of recreationists in this WSA are older people who depend heavily on off-highway vehicles for mobility. By eliminating vehicle use in the Little Chuckwalla's, wilderness designation would preclude traditional recreational activities of the area. There are approximately 30 miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use.

The wilderness values displayed by the Little Chuckwalla Mountains WSA are commonplace. The mountain/bajada landforms are typical throughout the California Desert. Better representations of these landforms and their associated wilderness values can be found in many suitably recommended WSAs nearby.

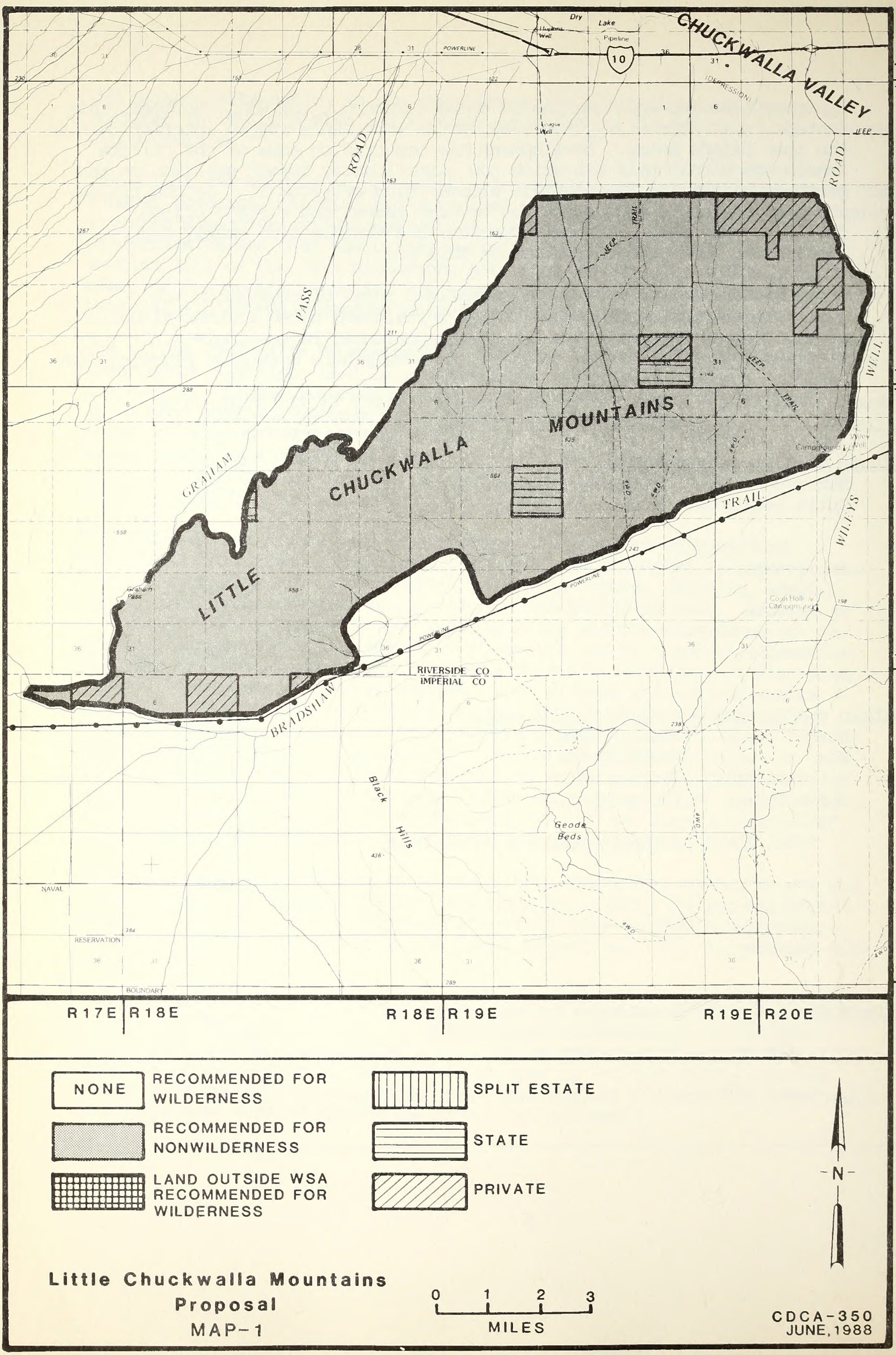
Within this WSA, naturalness has been reduced by a long history of mineral exploration and development. Primitive trails and areas of surface disturbance can be found at many locations in this WSA. Many trails, which were abandoned by miners, have been kept open by recreationists seeking remote rockhounding areas. Evidence of vehicle use in the Little Chuckwalla Mountains also acts to reduce the area's naturalness.

Opportunities for solitude can be found throughout the WSA. However, this perception is more easily achieved in the mountain's rugged interior than in the open bajada below. Development has occurred on some of the private inholdings within this WSA which now significantly impact solitude on the northern bajada and the mountain slopes which overlook it. Jojoba fields, which have been in production for several years, and a State prison facility, currently under construction, are visible from nearly every location in the northern portion of this WSA.

Opportunities for primitive and unconfined types of recreation are available throughout the WSA. Rugged terrain and harsh weather situations provide demanding challenges for even experienced recreationists. Traditionally, primitive recreation use levels here have been extremely low.

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	44,889
Split Estate	(BLM surface only)	0
Inholdings		
State		546
Private		2,148
Total		47,583
Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	0
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		0
Inholdings		
State		0
Private		0
Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	44,889
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		44,889


CHUCKWALLA VALLEY
Dry Lake
Hopkins Well
Pipeline
10
POWERLINE
(DEPRESSION)
Aqueduct Well
JEEP
ROAD
PASS ROAD
GRAHAM
Graham Pass
LITTLE CHUCKWALLA MOUNTAINS
JEEP TRAIL
4WD
Wiley Campground Well
WILEYS WELL ROAD
Coon Hollow Campground
BRADSHAW TRAIL
POWERLINE
RIVERSIDE CO
IMPERIAL CO
Black Hills
Geode Beds
NAVAL RESERVATION BOUNDARY
T6S
T7S
T7S
T8S
T8S
T9S
T9S
R17E
R18E
R18E
R19E
R19E
R20E
NONE
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES

Little Chuckwalla Mountains Proposal

MAP-1

CDCA-350
JUNE, 1988

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: Naturalness in this WSA has been reduced by a history of mineral exploration and development, and the passage of many off-highway vehicles. Several primitive ways, originally constructed in support of mineral exploration, criss-cross the area. These ways are kept open by the passage of off-highway vehicles accessing remote locations within these mountains. Areas of surface disturbance caused by mineral exploration can be found in many locations throughout this WSA.

2. Solitude: Within the Little Chuckwalla range itself, the numerous canyons, rough terrain and deep washes provide screening from other users and could support a large number of visitors at the same time. However, on the bajada and the northern slopes of the mountains, opportunities for solitude have all but been eliminated by developments that have occurred on private inholdings within the WSA. Jojoba fields cover approximately 320 acres in the northeast portion of the WSA. These fields, which have been in production a number of years, are highly visible because of their regular patterns of vegetation. A second development to impact solitude is a State prison facility, currently under construction in the northeastern portion of the WSA. In addition to the prison buildings, many ancillary facilities and a prison work farm are also planned for this site. These developments have a significant impact to solitude.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: For the most part, there are no physical restrictions in this WSA which would hinder movement. Therefore, opportunities for primitive and unconfined types of recreation are widely available. The harshness of terrain and the severe desert weather provide demanding challenges for experienced recreationists.

4. Special Features: Portions of the Little Chuckwalla Mountains WSA consist of suitable habitats for bighorn sheep and desert tortoise both of which are BLM sensitive species. The tortoise is currently being considered by the United States Fish and Wildlife Service for official listing as a threatened species. The mountain slopes provide potential range for the local bighorn sheep population, estimated at approximately 15 individuals. One existing big game guzzler is located within the WSA. The southern bajada, located within the Chuckwalla Bench ACEC, has desert

tortoise densities of 50 to 100 animals per square mile. Much of the WSA has been identified as highly crucial habitat for tortoise. This area may also support marginal populations of Couch's spadefoot toad, a sensitive species.

Several sensitive plant species may also be found in the Little Chuckwalla Mountains. California snakeweed (Colubrina californica) has been identified by the California Native Plant Society as endangered. Two other species present, Alverson's foxtail cactus (Coryphantha vivpara var. alversonii) and barrel cactus (Ferocactus Acanthodes var. Acanthodes), are candidates for listing on the Federal threatened and endangered species list.

B. Diversity in the National Wilderness Preservation System

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 44,889 acres of the American Desert/Palo Verde-Cactus Shrub ecosystem. The Little Chuckwalla Mountains WSA would not increase the diversity of the types of ecosystems represented in the NWPS.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas		Other BLM Studies	
	areas	acres	areas	acres
	NATIONWIDE			
American Desert/Palo Verde-Cactus Shrub	2	271,403	42	1,501,259
	CALIFORNIA			
American Desert/Palo Verde-Cactus Shrub	0	0	11	549,280

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of six major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a five-hour drive of the population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas		Other BLM Studies	
	areas	acres	areas	acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The WSA is within 50 air miles of 20 BLM WSAs recommended for wilderness designation. The closest designated wilderness areas are Joshua Tree Wilderness Areas, administered by Joshua Tree National Monument, 40 miles northwest.

C. Manageability

The Little Chuckwalla Mountains WSA is manageable as wilderness. However, two issues, development of private inholding and valid mineral rights, would greatly complicate manageability.

This WSA contains many acres of State and private inholdings of which over 1500 acres have been or soon will be developed to some degree. This development will, no doubt, make acquisition of these lands more difficult and more costly. However, without their acquisition, manageability would be significantly reduced because of the significant impact incurred on wilderness values.

Presently, one big game guzzler is located within the WSA. Maintenance is required approximately two times per year, and normally requires mechanized equipment and vehicles for transportation of vehicles to the site.

Similarly, mineral rights would have to be acquired on all valid mining claims to ensure manageability in large portions of the WSA. The WSA contains 83 unpatented mining claims. While many could be cleared through validity examinations, there will, no doubt, be some that retain their valid existing rights. These rights allow claimants to develop their claims in a manner reasonably incidental to their mining operation even if wilderness designation should occur. The only restrictions placed on these activities is that they not cause unnecessary or undue degradation, leaving sufficient latitude to cause severe impacts to existing wilderness values.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Little Chuckwalla WSA is located in the BLM Chuckwalla Mountains Geology-Energy-Mineral (G-E-M) Resource Area (GRA). The G-E-M data in the Wilderness portion of the CDCA Plan EIS (Volume B, Appendix III) stated that the Little Chuckwalla Mountains, which comprise the WSA, had a favorable geologic environment for metallic mineral deposits. The EIS indicated that in 1980, active gold exploration was occurring in the southeast portion of the WSA. There were eight unpatented mining claims identified in the EIS that were recorded with the BLM within the WSA on December 12, 1979.

   GRA files had classified three areas for mineral occurrence potential. An area classified in 1980 as having a high potential for occurrence of perlite was located in the southeastern portion of the WSA. Map 2 reflects the mineral resource potential of the WSA. The high potential rating was based on two perlite mines held by Great Western Exploration Co. at this location. The 1980 GRA file indicated that there was an estimated 1.5 million tons of perlite resources with a proven reserve of 388,400 tons.

   Along Graham Pass in the southwest portion of the WSA, the 1980 GRA identified an area that has geochemical evidence for the occurrence of rare earth elements, and chromium, a strategic mineral. This same area has also been explored for gold. The 1980 GRA file showed the area around Graham Pass having a moderate potential for the occurrence of gold, chromium, and rare earth minerals.

   The 1980 GRA file showed that the Little Chuckwalla Mountains had a low potential for the occurrence of metallic mineral resources based on limited geologic data. The EIS indicated that further mineral exploration work could be expected which may increase the potential of the area.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation which Should be Considered in the Final Recommendation: Mineral surveys for this WSA were conducted by the U.S. Geological Survey (USGS) and U.S. Bureau of Mines (BOM) associated with this WSA. Open File Report OPF-85-293 assesses the mineral potential of the WSA.

Unpatented mining claims located in the WSA are summarized in the following table taken from BLM records dated December, 1987.

Table 4 - Mining Claims

TYPE MINING CLAIM	NUMBER SUITABLE	 NONSUIT.	 TOTAL	ACRES SUITABLE	 NONSUIT.	 TOTAL
Lode	N/A	76	76	N/A	1,520	1,520
Placer	N/A	7	7	N/A	280	280
Mill Site	N/A	0	0	N/A	0	0
Total	N/A	83	83	N/A	1,800	1,800

E. Summary of Environmental Consequences of the Proposed Action

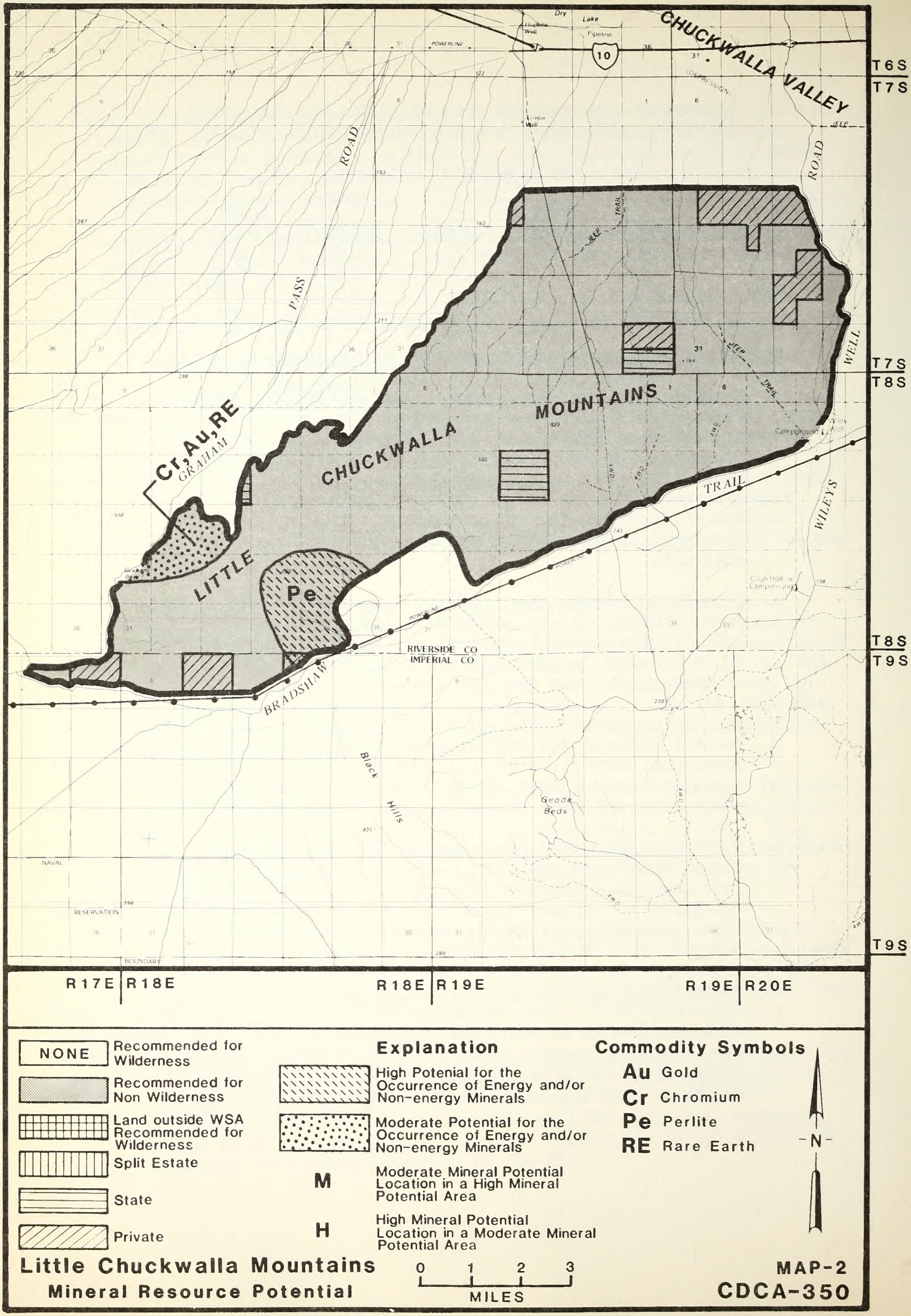
1. Impacts on Wilderness Values: Locatable mineral exploration and development will cause localized adverse impacts to naturalness in the areas of moderate and high mineralization, comprising approximately ten percent of the WSA. Continued vehicle use on roughly 15 miles of designated routes of travel will affect solitude and reduce the quality of primitive and unconfined types of recreation along the road corridors. Military aircraft engaged in low-level training maneuvers will continue to momentarily disrupt solitude.

2. Impacts on Bighorn Sheep/Habitat: Impacts to bighorn sheep and their habitat will be negligible, consisting of insignificant habitat loss caused by mineral development. Management guidelines in the Chuckwalla Mountains Habitat Management Plan will provide adequate protection for this species.

3. Impacts on Desert Tortoise/Habitat: Impacts on desert tortoise will consist of localized habitat loss caused by mineral development and occasional disruption of individuals by human intrusion. Management guidelines as outlined in the Chuckwalla Bench ACEC Plan and enforcement of State laws will protect this species and its habitat.

4. Impacts on Sensitive Plant Species/Habitat: Localized impacts caused by mineral exploration and development will adversely affect less than one percent of these species' habitats within the WSA. Management guidelines listed in the CDCA Plan, Chuckwalla Bench ACEC Plan, and Chuckwalla Mountains Habitat Management Plan adequately protect these species throughout the WSA.

5. Impacts on Locatable Mineral Exploration and Development: Opportunities for exploration and development of locatable minerals will continue to be available throughout the WSA. Exploration and development of mineral resources will be subject to the regulations stated in 43 CFR 3809 regarding surface disturbance as well as any additional constraints as listed in the CDCA Plan.


CHUCKWALLA VALLEY
10
Dry Lake
Pipeline
Hopkins Well
POWERLINE
(DEPRESSION)
JEEP
ROAD
PASS
GRAHAM
Cr,Au,RE
LITTLE
CHUCKWALLA
MOUNTAINS
Pe
JEEP TRAIL
4WD
WELL
Wiley Well
Campground
TRAIL
WILEYS
Coon Hollow Campground
POWERLINE
BRADSHAW
RIVERSIDE CO
IMPERIAL CO
Black Hills
Geode Beds
NAVAL
RESERVATION
BOUNDARY
T6S
T7S
T8S
T9S
R17E
R18E
R19E
R20E
NONE
Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M
Moderate Mineral Potential Location in a High Mineral Potential Area
H
High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
Au Gold
Cr Chromium
Pe Perlite
RE Rare Earth
N
0 1 2 3
MILES

Little Chuckwalla Mountains
Mineral Resource Potential

MAP-2
CDCA-350

6. Impacts on Access and Motorized Recreation Opportunities: Opportunities for motorized recreation and access on designated routes of travel will continue to be available. The LTVA will not be impacted.

7. Impacts on Developments and Activities Occurring on Private Inholdings: Development of the prison facility and related activities as well as agricultural development (jojoba) will be allowed to continue without threat of acquisition or constraint.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the Final CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Inaccuracies that are known to exist are noted in parentheses.

1. Inventory Phase: Of the 37 comments received, 25 (68%) were against inclusion of this roadless area into the National Wilderness Preservation System. Although, the overriding reason for not recommending the area as suitable was its history of general recreation and rockhounding use, the correspondents listed many other reasons. Hunting, the need for vehicular access to overcome the rugged terrain, past use of the area for competitive and noncompetitive off-highway vehicle (OHV) events, the existence of a network of roads and many old mines, and scars from Desert Training Center maneuvers during World War II were all identified as reasons for exclusion. Texaco expressed concern over the restrictions to oil, gas and geothermal energy exploration and the Los Angeles Department of Water and Power stated that transmission lines had already impacted the area.

   Nine of the comments were in favor of including the proposed area as shown, or in some cases, increasing the total size. Some of the reasons given for inclusion were the existence of "Indian sites" and the related archaeological potential and the need to protect wildlife and vegetation. The remaining three letters either provided general information or recommended partial inclusion.

2. Study Phase: Seven replies were received during the Study Phase. Of those, six were against a suitable recommendation. The reasons given for exclusion of the area were: aircraft noise, the site's value for rockhounding, the need for multiple use management, and

the number of roads in the area. Two of the replies were provided by the Searchers Gem and Mineral Society and the San Diego County Mineral and Gem Society.

The lone letter in support of WSA status for the area declared that if BLM were following the intent of the Wilderness Act, this roadless area would have been included.

3. Draft Plan Alternatives: Numerous comments were received in response to the Draft Plan Alternatives. The majority of the letters favored the no wilderness recommendation. However, some respondents suggested that the all wilderness alternative with an expanded boundary was more appropriate. Generally, the consensus of opinion was that rockhounding and vehicle oriented activities were the best use of the WSA.

   No comments were received from local governments.

4. Proposed Plan: Practically every comment received in response to the Proposed Plan was general in nature and reiterated the overall positions as stated in the Draft Plan Alternatives.

Palo Verde Mountains

CDCA 352

PALO VERDE MOUNTAINS WILDERNESS STUDY AREA (WSA)

(CDCA-352)

1. THE STUDY AREA --- 29,843 acres

The Palo Verde Mountains WSA is located in the southeastern portion of the California Desert Conservation Area (CDCA), in the northeast corner of Imperial County. About 200 acres of the WSA's northern tip extends into Riverside County. The closest town is Blythe, about 18 air miles northeast. State Highway 78 passes within three miles of the WSA's east boundary; the unincorporated community of Palo Verde straddles Highway 78 five miles from the study area. The WSA contains 28,293 acres of public land administered by the Bureau of Land Management (BLM), 1,271 acres of State land, and private inholdings totalling 279 acres (See Map 1 and Table 1).

On all four sides the WSA adjoins other public lands administered by the Bureau of Land Management, although on the south and west the public land is heavily checker-boarded, with approximately every other section in private ownership. However, the neighboring private parcels remain undeveloped. A 161-KV powerline forms the WSA's east boundary, located within a two mile wide utility corridor recognized by the CDCA Plan. The irregular south boundary follows section lines, avoiding private property and public lands lacking wilderness characteristics. Milpitas Wash Road (which becomes Wiley Well Road) forms the WSA's west boundary. The north boundary is not aligned with any physical feature.

The WSA is readily accessible by two-wheel drive vehicle, via the graded dirt Milpitas Wash Road from State Highway 78. The Old Palo Verde Road, also graded dirt, closely parallels the WSA's east boundary for about three and a half miles. From the Old Palo Verde and Milpitas Wash Roads, unmaintained primitive ways requiring an off-highway vehicle extend into the interior of the study area.

Elevations within the WSA range from 440 to 1,604 feet. The high point is in the center of the study area on the more southerly of the twin buttes known as the Flat Tops. These buttes stand out as a landmark, since the rest of the Palo Verde range is jagged peaks, running through the WSA from northwest to southeast. Palo Verde Peak, at 1,795 feet the high point of the range, lies outside the WSA on the east side of Old Palo Verde Road. Vegetation on the mountain slopes and the rolling alluvial plains flanking them is primarily creosote bush scrub. The landscape is heavily dissected by dry washes, the larger of which support desert microphyll woodland dominated by palo verde, mesquite, and ironwood.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the

Draft and Final Environmental Impact Statements (EIS) for the CDCA Plan: protection, use, balanced and no action, and a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

0 acres recommended for wilderness
28,293 BLM acres recommended for nonwilderness

No wilderness is the recommendation for this WSA. The entire acreage in this WSA is released for uses other than wilderness. Under the recommendation selected, the majority of the Palo Verde Mountains WSA (approximately 94%) will be managed for low intensity, carefully controlled use. This designation will permit access for both motorized recreation and mineral exploration and development, while as much as possible preserving the area's natural character and protecting biological and cultural resources. A 1,760 acre area at the southeastern edge of the WSA comprising about six percent of the total acreage will be designated for moderate intensity use, to allow increased levels of mineral exploration and potential development, and utility corridor maintenance and development. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

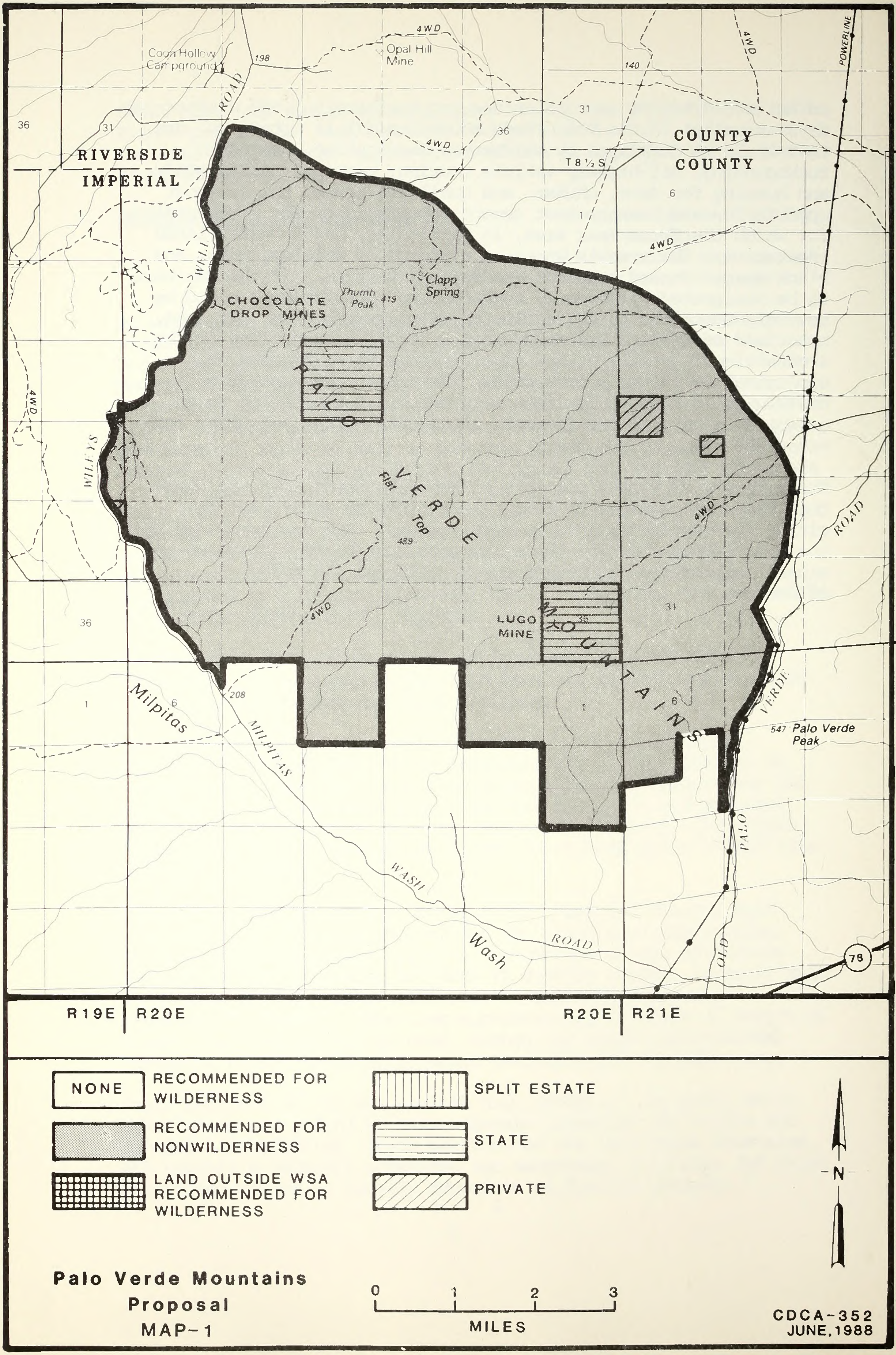
The no wilderness recommendation is based on the following rationale: (1) the Palo Verde Mountains WSA is very similar to nearby study areas that have been recommended for wilderness; (2) portions of the area have high potential for gold, and moderate potential for manganese, mercury, and barite; and (3) wilderness designation would displace 90% of the recreation use that the area presently receives.

This WSA is similar to the nearby Indian Pass and Picacho Peak WSAs, both of which are recommended for wilderness designation. The Palo Verde Mountains WSA does not provide unique wilderness recreation opportunities, nor does it contain natural features that would make it a unique addition to the National Wilderness Preservation System. There are approximately 25 miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use.

Small portions of the WSA exhibit high potential for gold, while other areas are judged to have moderate potential for barite and mercury. In addition, major portions of the Palo Verde Mountains WSA exhibit a moderate potential for manganese, a mineral for which the United States is heavily dependent on foreign sources.

An estimated 90% of recreation use (approximately 1,500 visitor use days annually) in the Palo Verde Mountains WSA is motorized, use that would be displaced by wilderness designation. Although rockhounding, off-highway vehicle touring, camping, nature study, and hunting for deer, chukar, and quail all occur, the foremost opportunity and the greatest demand appears to be for rockhounding, for which the Thumb Peak area, in particular, has an established reputation. The area is known as a source of paisley, moss, and black agate; banded nodules; geodes; and tarrite. If the WSA were to be designated wilderness, rockhounding opportunities would be severely curtailed by the exclusion of motor vehicles. To date, motorized recreation has not caused a significant decline in the area's visual quality or had significant adverse impacts on biological or cultural resources. The area appears capable of continuing to support low intensity motorized recreation in an essentially natural environment, along with hiking and other non-motorized uses.

The majority of public comments on the Palo Verde Mountains urge that the area continue to remain accessible by motor vehicle, citing its recreational and mineral values. BLM has concluded that the area's potential for these two uses, motorized recreation and mineral exploration and development, outweigh its value as wilderness.


Coon Hollow Campground
198
4WD
Opal Hill Mine
140
4WD
POWERLINE
ROAD
36
31
31
36
4WD
COUNTY
COUNTY
T8S
T9S
T8½S
RIVERSIDE
IMPERIAL
1
6
6
1
4WD
WELL
CHOCOLATE DROP MINES
Thumb Peak 419
Clapp Spring
PALO VERDE MOUNTAINS
4WD
WILEYS
Flat Top 489
4WD
ROAD
4WD
36
31
LUGO MINE
36
T9S
T10S
208
Milpitas
MILPITAS
1
6
1
6
VERDE
547 Palo Verde Peak
PALO
WASH
Wash
ROAD
OLD
78
R19E
R20E
R20E
R21E
NONE
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES

Palo Verde Mountains Proposal

MAP-1

CDCA-352
JUNE, 1988

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	28,293
Split Estate	(BLM surface only)	0
Inholdings		
State		1,271
Private		279
Total		29,843

Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	0
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		0
Inholdings		
State		0
Private		0

Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	28,293
Split Estate	(BLM surface only)	0
Total BLM Lands Not Recommended for Wilderness		28,293

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The area remains affected primarily by the forces of nature, although a number of minor surface disturbances have resulted from vehicle use and mining. The area contains approximately 32 miles of primitive ways. The majority of these ways are unobtrusive; many follow dry washes where vehicle tracks are obliterated with each storm. But about a third of the mileage crosses desert pavement, where vehicle tracks are firmly etched as a light

line in the dark pavement surface. The spine of the Palo Verde Mountains extending across the WSA from northwest to southeast has been a barrier to east-west vehicular travel. Routes penetrating the WSA from either direction terminate when they reach the steep, rocky slopes. However, at the northern terminus of the compact Palo Verde range, one primitive way spans the WSA from west to east, connecting with the graded roads on either side of the study area. The WSA also contains small prospect holes and other minor surface disturbances on mining claims. Most of these are unobtrusive, but one that is visible for a considerable distance is on the south-facing slope of the north Flat Top, at about the 1,100 foot elevation. The red color of the material exposed by the prospect contrasts with the otherwise brownish mountainside. The concrete foundation of an old building is found near this prospect.

2. Solitude: Opportunities for solitude vary depending on location, improving as one moves away from points where approved vehicle routes meet the WSA boundary. Topography helps to screen visitors from each other to a moderate extent, although about 35% of the Palo Verde Mountains WSA is rolling plains, which lack the screening ability of more heavily dissected landforms. Nevertheless, low visitation ensures that the seeker of solitude will normally be successful here.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: Opportunities exist for primitive recreation such as hiking, backpacking, nature study, and photography. Current primitive recreation use levels are low, estimated at 200 visitor use days annually.

4. Special Features: Several plant and animal species of special concern occur within the WSA. The area provides seasonal habitat for the desert bighorn sheep a BLM sensitive species. Desert tortoise inhabit the WSA, a species under status review by the U.S. Fish and Wildlife Service for possible listing as threatened or endangered. The population size is unknown. Saguaro cactus occurs in the southeastern part of the study area as a few isolated individuals. This species is listed by the California Native Plant Society as "rare or endangered in California but more common elsewhere."

Wild, free roaming burros are also found within the WSA, with management efforts guided by the 1984 Colorado River Herd Management Plan. The WSA is part of the Chocolate/Mules subunit delineated in the plan, which in 1986 had a total estimated burro population of 500 to 600 head, growing at a rate of approximately 23% annually. However, most of these animals are outside the WSA on other portions of the subunit.

Clapp Spring and its palm oasis are unique in the local area, there is no other known permanent water source in the WSA. Although it is not unusual to find a small palm oasis at a desert spring, springs themselves are scarce in the Colorado Desert. Another unusual aspect of Clapp Spring is its location in a relatively open landscape. Most desert palm oases are tucked away in a canyon.

Considerable archeological inventory has been conducted within the Palo Verde Mountains WSA, resulting in the discovery of 25 sites, one historic and 24 prehistoric. The prehistoric sites consist of cleared circles, rock rings, several lithic and ceramic scatters, temporary camps, small rock shelters, and at one location, the unusual occurrence of two cached ollas (spherical clay pots with a small mouth). Five aboriginal trail segments were included in the inventory. The single historic site appears to be a series of military foxholes, possibly related to tank tracks that have been documented just outside the WSA. This area is within the California-Arizona Desert Maneuver Area, where troops were trained during World War II. None of the sites have been considered for nomination to the National Register of Historic Places, though some are probably eligible. Additional data would be required to fully assess their potential for listing. The abundance of intermittent streams and the presence of stable desert pavement surfaces within the WSA suggest that additional undiscovered archeological resources are likely.

B. Diversity in the National Wilderness Preservation System

1. Assessing the diversity of natural systems and features as represented by ecosystems: The Palo Verde Mountains WSA contains 28,293 acres of the American Desert/Creosote Bush-bur sage (Larrea-Franseria) ecosystem. It is ecologically very similar to the Indian Pass and Picacho Peak WSAs about 13 miles south, both of which are recommended for wilderness designation. It is also similar to the Chuckwalla Mountains WSA about 22 miles northeast, a portion of which is recommended for wilderness.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas areas	NWPS Areas acres	Other BLM Studies areas	Other BLM Studies acres
	NATIONWIDE			
American Desert/Creosote Bush-bur Sage	3	126,033	48	1,543,772
	CALIFORNIA			
American Desert/Creosote Bush-bur-Sage	2	26,472	20	949,311

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of five major population centers. Table 3 summarizes the number and acreage of wilderness areas and other BLM study areas within a five-hour drive of these population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas areas	NWPS areas acres	Other BLM Studies areas	Other BLM Studies acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Nevada				
Las Vegas	46	3,507,243	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The closest designated area is Joshua Tree Wilderness, managed by the National Park Service, approximately 50 air miles northwest. In addition, ten BLM study areas

recommended for wilderness designation are within 50 air miles, seven in the California Desert District and three in Arizona's Yuma District.

C. Manageability

The Palo Verde Mountains WSA is manageable as wilderness. Although the area has a long history of motorized use and is currently managed as a Limited Use Area where vehicles are allowed on approved routes, the intensity of this use is light. If the area were to be designated wilderness, increased ranger patrols would be required to ensure against vehicular trespass. However, the prediction based on current usage is that the frequency of violations would be low.

Development of valid mining claims would also create manageability problems for the WSA if designated wilderness. Surface disturbance, noise, and dust caused by mining would all degrade wilderness values.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: Prior to publication of the CDCA Plan, BLM prepared a Geology-Energy-Mineral (G-E-M) Report for the Palo Verde Mountains G-E-M Resource Area (GRA), of which the WSA is a part. However, the CDCA Plan did not fully analyze and interpret the Palo Verde Mountains GRA Report as it specifically relates to this WSA. The CDCA Plan shows the WSA to have a known potential for manganese, and a possible potential for barite and uranium. Although mineral resource potential classifications were not completed, the GRA Report documents known occurrences of barium in the northwestern and western portions of the WSA, the location of gold in the southern portion, and manganese mines and occurrences scattered throughout the WSA. In addition, the GRA Report shows a mercury occurrence in the west central portion, and an iron occurrence in the central and southeastern portion of the WSA. This mineralization occurs at the boundaries of the Chocolate Mountain thrust plate, and in pegmatite intrusives into Paleozoic granitic rocks. The GRA file data did not contain any evidence supporting uranium mineralization in the WSA.

   This latter period was the most productive, stimulated by the General Services Administration former stockpile purchasing program, which terminated when the stockpile quota was reached in 1960. The 1977 California Division of Mines and Geology (CDMG) County Report 7 indicates that the Cone Mountain Mine within the WSA produced mercury; however, production figures were not available. The geologic environment surrounding this occurrence supports a BLM moderate potential classification for mercury in the south-central portion of the WSA.

The CDMG Report indicates barite was produced from an area immediately outside the western boundary of the WSA in the 1960s. This data, together with verified occurrences in the western portion of the WSA, and deposits reported in the northeastern portion of the WSA, support a BLM classification of moderate potential for occurrence in the northeastern and southwestern portions of the WSA.

Hobbyist mineral specimen collectors cite the presence of black and paisley agates, chalcedony, and geodes in the northwestern part of the WSA. BLM inventory data shows an area in the northwestern portion of the WSA as being an excellent location for collecting semi-precious gems, rocks, and mineral specimens. This area is classified as having a high potential for the occurrence of these minerals (See Map 2).

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Recommendation: There were no U.S. Geological Survey and U.S. Bureau of Mines mineral surveys conducted in the WSA because it is recommended nonsuitable for wilderness designation.

   Under the BLM classification system, the central, northwestern, and southeastern portions of the WSA are considered to have a moderate potential for the occurrence of manganese and iron. The most important mines within the WSA, in terms of past production and potential reserves, are the Chocolate Drop group on the northwestern boundary and the Lugo Mine in the southeastern portion of the WSA. Though all of its mines are now inactive, the WSA has yielded 25,000 tons of manganese ore, about 47% of Imperial County's historic production. Periods of notable activity occurred from 1945 to 1948 and 1952 to 1959.

   In 1984, a miner reported to BLM the recovery of gold from both unpatented placer and lode claims in the southern part of the WSA. Additional development and recovery has not been reported by the miner, but operations were ongoing in 1987. Production figures were not given. The grade of ore was low to moderate, with the best showings in high grade pockets and lenses of quartz. This information, together with 1980 GRA occurrence locations, supports a high potential for the occurrence of gold in two areas in the south-central and southeastern portions of the WSA.

The WSA is within the Palo Verde Mountains Mining District. Unpatented lode mining claims are concentrated in the western and central portion of the WSA, and unpatented placer mining claims are located in the central portion. Unpatented mining claims recorded with BLM as of December 1987 are summarized in the following table.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	N/A	36	36	N/A	720	720
Placer	N/A	6	6	N/A	240	240
Mill Site	N/A	0	0	N/A	0	0
Total	N/A	42	42	N/A	960	960

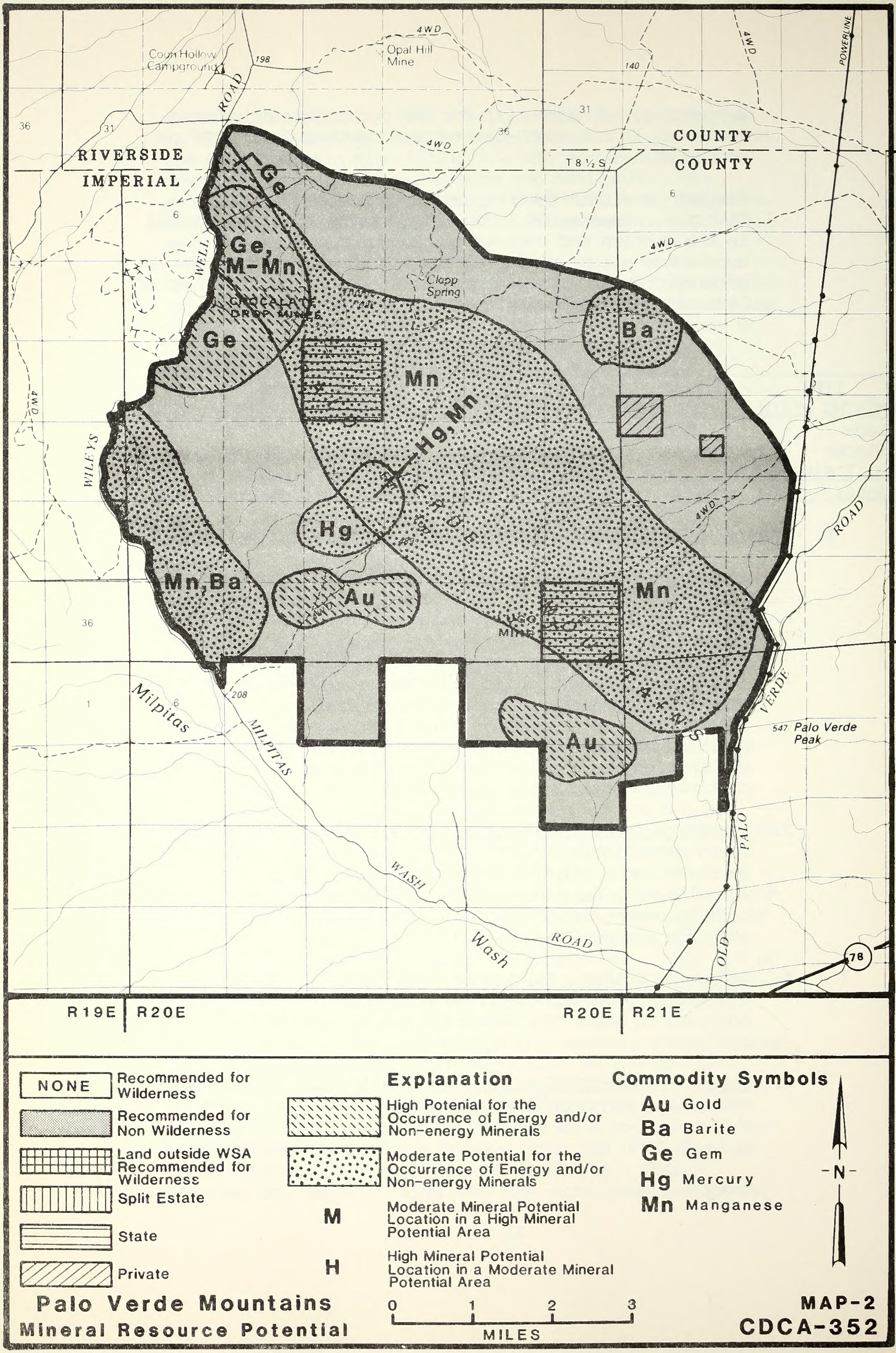
E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: In the short term there will be no impact. Over the long term, naturalness and opportunities for solitude and primitive and unconfined recreation will experience major, though site specific, negative impacts as a result of mineral development. The cumulative effect of continued OHV use will have a minor, generalized negative impact to naturalness. Current opportunities for solitude and primitive recreation will be retained away from areas of mining activity. Military aircraft engaged in low-level training maneuvers will continue to momentarily disrupt solitude.

2. Impact on Sensitive Plant and Animal Species: There will be no significant impact. Patrol efforts and mitigation measures to be stipulated as part of any authorized activity will help assure that populations of desert bighorn sheep, desert tortoise, and saguaro cactus receive adequate protection.

3. Impact on Cultural Resources: All proposed surface disturbing activities will be subject to environmental analysis to allow the detection and salvage of any resources.

4. Impact on Motorized Recreation: No impact. Motorized recreation can continue on approved routes.


Coon Hollow Campground
198
4WD
Opal Hill Mine
140
4WD
POWERLINE
ROAD
31
36
36
31
4WD
RIVERSIDE
IMPERIAL
COUNTY
COUNTY
T8½S
T8S
T9S
1
6
6
1
WELL
Ge
Ge, M-Mn
CHOCOLATE DROP MINE
Ge
4WD
Clapp Spring
Ba
Mn
Hg, Mn
WILEYS
4WD
Hg
ROAD
Mn, Ba
Au
Mn
36
LUGO MINE
T9S
T10S
1
6
Milpitas
208
MILPITAS
VERDE
547 Palo Verde Peak
Au
PALO
WASH
Wash
ROAD
OLD
78
R19E
R20E
R20E
R21E
NONE Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
Au Gold
Ba Barite
Ge Gem
Hg Mercury
Mn Manganese
N
0
1
2
3
MILES

Palo Verde Mountains
Mineral Resource Potential

MAP-2
CDCA-352

5. Impact on Energy Transmission: Development of the designated utility corridor on the east boundary of the WSA can proceed in accordance with the CDCA Plan. Proposals to expand the corridor westward can be considered, subject to CDCA Plan guidelines.

6. Impact on Locatable Mineral Exploration and Development: Further exploration, as well as development of the 42 existing claims, can proceed subject to a plan of operations.

7. Impact on Colorado River Project: BLM can consider requests from the Bureau of Reclamation, as well as other entities, for use of rip-rap rock resources within the study area.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Known inaccuracies are noted in parentheses.

1. Inventory Phase: The majority of the public comments described routes which were needed for access for rock collecting. Following further field examination by staff, appropriate changes were made and are reflected in the current map and narrative.

2. Study Phase: Twenty-four of the 27 comments received on this WSA opposed further wilderness study for this area. Most letters were from rock collectors or from individuals or businesses desiring to keep the area open to exploration and development of the area's mineral resources.

   The northern portion of the Palo Verdes is a favorite area for amateur gem and mineral collection. It is popular with families and with the many retirees who spend much of the winter in nearby campgrounds. Wilderness designation would limit access to many trails which are needed to reach favorite collecting spots. Prospectors and mining companies stated that the area is highly mineralized.

They wished to keep roads and trails open and pointed out the economic impacts to the county and the nation of closing this area. Minerals found in the area were said to include barite, gold, silver, manganese, and copper. Rockhounds cited the WSA as a source of black, paisley, and fire agates, desert float, chalcedony roses, jasper, and geodes.

Two petroleum companies wanted the area left open to exploration for oil, gas, and geothermal resources. The U.S. Water and Power Resources Service mentioned the need for quarry areas for rip-rap to be used for maintenance of Colorado River projects. San Diego Gas and Electric Company asked that the eastern border be moved to the west to allow space for future energy transmission lines. (The

eastern border is at the edge of a two mile wide utility corridor presently containing one 161-KV powerline). Sight and sound intrusions mentioned were low-flying aircraft, various manmade facilities, and noise from a nearby gunnery range.

Three comments were received which made statements which could be interpreted as favoring wilderness for this WSA. One said that several tanks in the area offer habitat for a scattered toad population; the second said the hills are being chewed up by off-highway vehicles, and the third stated that the area offers good opportunities for solitude.

Six comments were received in response to the Public Input Workbook of 3-15-79. One favored wilderness because of the ecological values of the Palo Verde Mountains and the lack of significance of manmade intrusions. Five respondents opposed wilderness, noting again the need for access to favorite rockhounding and family camping spots. The County of Imperial wanted access to a material site on the east boundary.

3. Draft Plan Alternatives: Few comments specific to this WSA were received in response to the Draft Plan Alternatives. However, this WSA was one of several which were opposed by the National Outdoor Coalition, a group of mining, rockhounding, and off-highway vehicle organizations. A large number of club members filled in coupons and sent letters supporting a multiple use designation of intensive use for this area. This recommendation was not in agreement with any of the alternatives. The Sierra Club and other wilderness proponents also submitted many letters supporting wilderness for this area, which was in agreement with the Protection Alternative. Petroleum companies, the U.S.

Water and Power Resources Service, and the San Diego Gas and Electric Company made the same requests for access as in the Study Phase.

4. Proposed Plan: In response to the recommendation of the Proposed Plan to designate this area for low intensity multiple use, many comments were received from wilderness proponents, led by the Sierra Club and the Wilderness Society, urging that the area be recommended as suitable for wilderness. Reasons given were the striking scenery and rich stands of Sonoran vegetation in the washes. Also noted were the excellent opportunities for hiking and climbing, as well as other less strenuous activities. Several rock collectors stated again that this is a favorite area and that vehicle access is usually needed; they asked for a change from the recommended low intensity multiple use to moderate intensity.

   No comments were received from local governments.

Indian Pass

CDCA 355

INDIAN PASS (JULIAN WASH) WILDERNESS STUDY AREA (WSA)

(CDCA-355)

1. THE STUDY AREA --- 32,287 acres

The Indian Pass WSA is located in eastern Imperial County, in the southeast corner of the California Desert Conservation Area (CDCA). Nearest cities are Brawley, 50 miles east; Blythe, 40 miles north; and Yuma, Arizona, 35 miles south. The WSA includes 31,493 acres of public land under jurisdiction of the Bureau of Land Management (BLM), 640 acres of State land, 140 acres of California Department of Fish and Game lands, and 14 private acres (see Map 1 and Table 1). The study area borders other public lands on the west and south. The WSA's west and south boundaries follow a combination of dry washes and other topographic features, and a portion of the Black Mountain Road and primitive vehicle ways. Imperial National Wildlife Refuge and Picacho State Recreation Area adjoin the WSA on the east. The north boundary follows the boundary of public and private or State lands.

Two-wheel drive vehicle access to the southern edge of the WSA is available via the Picacho Road north from Winterhaven, California (near Yuma, Arizona) or via the Indian Pass Road east from County Highway S34 (Ogilby Road). Two-wheel drive vehicle access to the west boundary of the WSA is available via the Black Mountain Road east from State Highway 78. All three of these graded access roads are maintained by Imperial County. Four wheel drive vehicle access is available to the north edge of the WSA via Vinagre Wash and Arrowweed Spring.

The Indian Pass WSA is a distinctive subunit of the Chocolate Mountains, a range which extends from south central Riverside County to the Colorado River near Yuma. Quartz Peak (2,177 feet) is the highest point in the WSA. Elevations generally decrease from west to east with the lowest elevation (250 feet) occurring along the east boundary at Para Wash. Within the WSA the Chocolates form a picturesque land of jagged multi-colored peaks and spires. The rugged mountains are dissected by mazes of twisting canyons which carry the runoff of occasional desert cloudbursts into several broad tree-lined washes, which in turn transport the floodwaters eastward to the Colorado River. One of these large washes, Gavilan, forms the south boundary of the WSA. Another passes through the heart of the area and gives rise to the region's local name, "the Julian Wash country." These large washes also serve as primitive ways, providing access for both primitive and non-primitive forms of recreation.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). The area possesses a variety of plants, described in the Special Features section. Four alternatives were analyzed in the Draft and Final Environmental Impact Statement (EIS) for the CDCA Plan: protection, use, balanced, and no action; a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

32,147	acres recommended for wilderness
891	BLM acres recommended for nonwilderness

Ninety-four percent suitable partial wilderness is the recommendation for the Indian Pass WSA. In addition, 891 acres of adjacent public lands outside the WSA are recommended for wilderness designation. These lands bordering the southwest corner of the WSA were determined to have outstanding wilderness values during the study phase. The 891 acres in this WSA recommended nonsuitable are released for uses other than wilderness. In addition to the Federal acreage recommended for wilderness, BLM recommends that a 640-acre State inholding and a 14-acre private inholding be acquired through exchange or purchase and designated as wilderness. With acquisition of this inholding, a total of 32,147 acres are recommended for wilderness. Appendix 1 lists all inholdings and provides additional information on their acquisition. The 160 acres belonging to the California Department of Fish & Game on the study area's east boundary, is recommended for exclusion from the proposed wilderness area and retention by that agency. During the wilderness inventory, conflicting records on the master title plats led to the erroneous belief that this parcel was public land, which is probably why it was included within the WSA. It is now recommended for exclusion from the wilderness, since the title dispute has been resolved in favor of CDFG who does not wish to dispose of the parcel, and because the parcel's position at the edge of the study area does not hamper management of BLM lands recommended for wilderness. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The partial wilderness recommendation is based on the following rationale: (1) The area recommended for wilderness exemplifies the definition of wilderness outlined in section 2(c) of the Wilderness Act; (2) the area recommended for wilderness is important wildlife habitat, ecologically unique among California Desert District WSAs; (3) although it was recognized that wilderness designation would conflict with mineral development, it was determined that the area's wilderness values were more significant than its mineral resource values; and (4) the areas recommended for nonwilderness exhibit lower quality wilderness values than the rest of the study area, such that resolution of the mineral conflicts would not be justified. The suitability recommendation will preclude any further vehicular use of approximately 10 miles of primitive access routes of travel.

The lands recommended for wilderness designation possess an outstanding primitive character which exemplifies the qualities described in the definition of wilderness contained in Section 2(c) of the Wilderness Act. Here "the earth and its community of life are untrammeled by man," and man himself is a visitor who does not remain." The land retains its "primeval character and influence, without permanent improvements or human habitation." Opportunities for hiking, backpacking, exploring, and other primitive and unconfined types of recreation are limited only by the stamina of the visitor. Low visitation and the screening effect of rugged topography insure ample opportunities for the seeker of solitude. Excellent scenic quality and opportunities to view desert bighorn sheep and view or hunt burro mule deer contribute significantly to the appeal of this primitive region.

Proximity to the Colorado River contributes to a combination of recreational opportunities found in few other California Desert wilderness study areas. The east boundary of the Indian Pass WSA is separated from the river by a strip of Imperial National Wildlife Refuge land averaging less than a mile in width. The President has recommended to Congress that most of these contiguous refuge lands and nearby lands on the east bank of the river be included within the National Wilderness Preservation System. Inclusion of both BLM and refuge lands in the Wilderness System would result in a combined wilderness of over 37,000 acres on both sides of the Colorado River, affording unique opportunities for a combined desert hiking/backpacking/canoeing experience. Since the wildlife refuge is closed to camping, BLM wilderness lands within a mile of the river would be an important component of the overall experience.

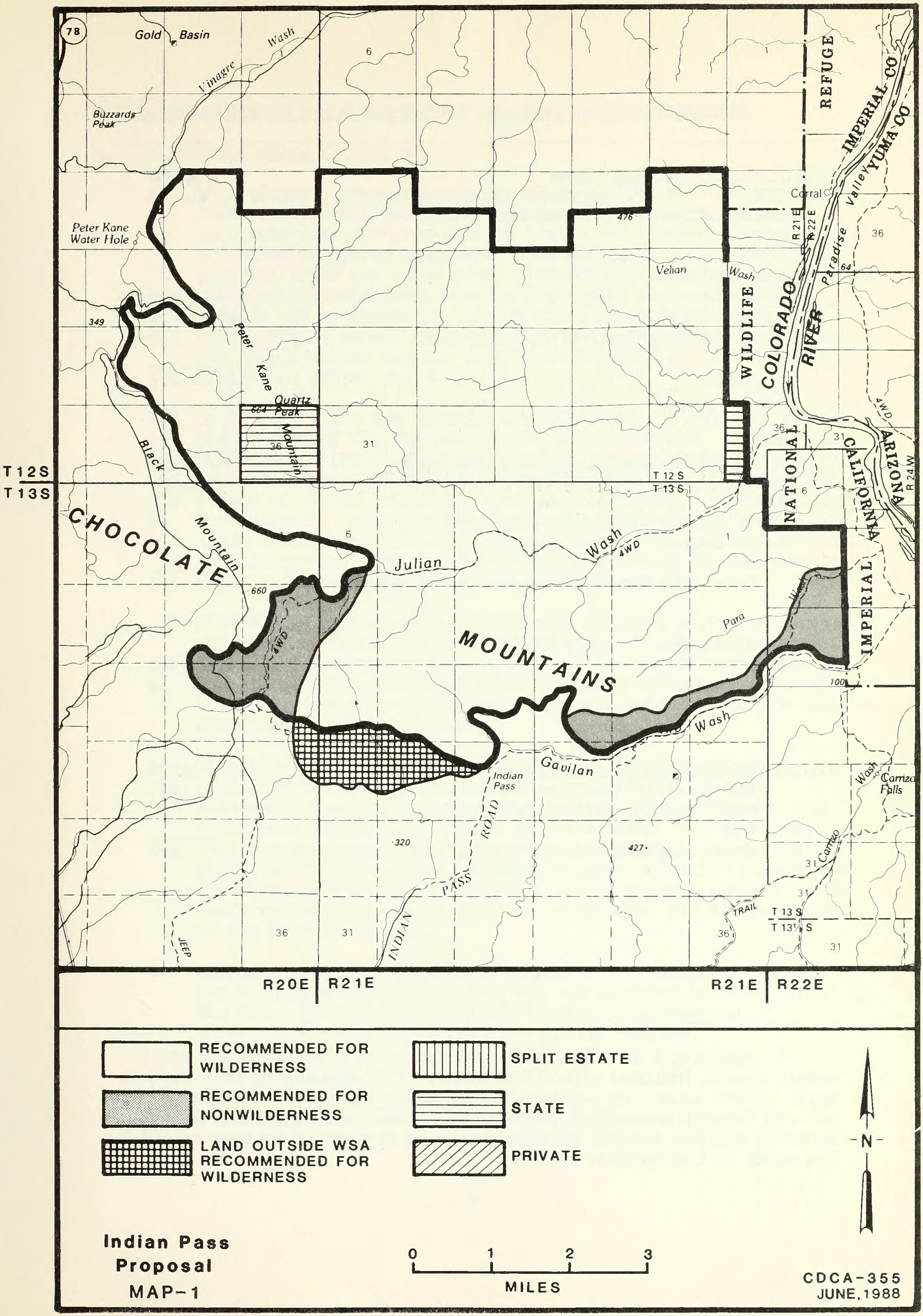
The combined BLM - Fish and Wildlife Service wilderness would also enhance overall protection of the unusual variety of wildlife habitats found in the area. The flora and fauna of the area are influenced by the proximity of the Colorado River, which has resulted in an environment seldom found in the California Desert.

Portions of the lands recommended for wilderness appear to have moderate to high potential for gold, silver, and tungsten. It is likely that some of the 233 claims in the recommended wilderness area contain developable resources. Mining could result in significant cumulative adverse impacts to the area's wilderness values, a subject that is discussed further in the "Manageability" section of this report.

In the event that Congress designates this WSA as wilderness, BLM recommends that the area be named the "Julian Wash Wilderness." The popular name for the WSA region is "Julian Wash country" or "Julian Wash area." This name is more appropriate for the area than "Indian Pass," since the latter feature is actually outside of the proposed wilderness. The Indian Pass Road is a maintained county road providing access from County Highway S-34 to Picacho State Recreation Area via Indian Pass. Use of the name "Indian Pass" for the wilderness would be misleading and confusing to the public because the name is most commonly associated with this important motorized vehicle access route.

The California Department of Fish and Game has recommended that vehicular access in Julian Wash be retained, both for administrative access to the CDFG parcel and public access for recreational purposes, especially hunting. Although continued vehicle use of Julian Wash has not been formally proposed by BLM via a CDCA Plan amendment, the CDFG recommendation appears to be a viable management option.

Manageability of the recommended wilderness area will be enhanced by excluding that portion of the WSA recommended for nonwilderness. The public lands recommended for nonwilderness are located in two areas. Approximately 931 acres are adjacent to Gavilan and Para Washes on the southeastern margin of the WSA. This area contains surface disturbance and vehicle ways related to prospecting activity and receives moderate off-highway vehicle use. The recommended wilderness boundary follows natural features which preclude further encroachment by vehicles. The remaining 905 acres of recommended nonsuitable lands are located southwest of Black Mountain, on the southwestern margin of the WSA. Nearly this entire area is judged to have moderate potential for copper, while a smaller portion has high potential for gold. These lands are already moderately to heavily impacted by prospecting and mining activity.


78
Gold Basin
Vinagre Wash
Buzzards Peak
Peter Kane Water Hole
349
Peter Kane Mountain
Quartz Peak
664
Black Mountain
CHOCOLATE MOUNTAINS
660
4WD
Julian Wash
476
Velian Wash
WILDLIFE REFUGE
NATIONAL
COLORADO RIVER
Corral
Paradise Valley
64
IMPERIAL CO
YUMA CO
CALIFORNIA
ARIZONA
IMPERIAL
R 21 E
R 22 E
R 24 W
T12S
T13S
T 12 S
T 13 S
Para Wash
100
Gavilan Wash
Indian Pass
INDIAN PASS ROAD
320
427
JEEP
TRAIL
Carrizo Wash
Carrizo Falls
T 13 S
T 13½ S
1
6
31
36
R20E
R21E
R22E
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES
CDCA-355
JUNE, 1988

Indian Pass Proposal

MAP-1

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	31,493
Split Estate	(BLM surface only)	0
Inholdings		
State		640
Private		14
California Dept. of Fish and Game		140
Total		32,287

Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	30,602
BLM	(outside WSA)	891
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		31,493
Inholdings[1]		
State		640
Private		14

Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	891
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		891

---

[1] Appendix 1 is a detailed description of inholdings and split estate tracts included within the study. For purposes of this report, split estate lands are defined only as those lands with Federal surface and non Federal subsurface (minerals). Lands that have Federal minerals but non Federal surface should be classified in this report by the owner of the surface estate.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The area recommended for wilderness designation is essentially untrammeled by man. The only signs of man are archaeological features such as trails and cleared circles, posts and other monuments associated with mining claim location, and prospect holes and other minor disturbances associated with mining claim annual assessment work (primarily on claims predating interim WSA management). All of these man-made features are substantially unnoticeable with the WSA. The areas recommended for nonwilderness contain more human intrusions, including ORV trails and mining scars.

2. Solitude: There are numerous opportunities for solitude within the portion of the WSA recommended for wilderness. At present, human use of the area is very limited. Even if visitation increases dramatically, the size of the area and the screening effect of rugged topography will work to preserve opportunities for solitude. Opportunities for solitude also exist within the lands recommended for nonwilderness, but these areas are generally more frequently used than the other portions of the WSA because of their location on the periphery of the study area.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: Opportunities for primitive recreation abound on the lands recommended for wilderness designation, limited only by the necessity for the wilderness user to carry water into the area. The area presents fine opportunities for hiking, backpacking, sightseeing, nature study, wildlife viewing, and hunting under primitive conditions. Primitive recreation opportunities are of a lower quality in the lands recommended nonsuitable for wilderness, due to the presence of man-made intrusions.

4. Special Features: One sensitive plant, the California ditaxis, has been found in Gavilan Wash and may be found in other parts of the WSA. It is a candidate for listing as endangered or threatened by the U.S. Fish and Wildlife Service.

The WSA's proximity to the Colorado River and the deserts of Arizona contribute to the presence of wildlife species not commonly found in the CDCA. The Colorado River toad (the largest species of toad in North America), great plains toad, and tree lizard are examples of species which, while common in other states, are seen in few areas of California.

Burro mule deer occur over the entire WSA. The California Department of Fish and Game (CDFG) has not attempted a census in recent years, but the deer are present in appreciable numbers. CDFG research indicates that the population is generally in excellent health, with some bucks weighing in at over 200 pounds.

The rugged mountains of the WSA also provide ideal habitat for the desert bighorn sheep. The sheep are commonly observed over most of the area. The latest CDFG census was conducted in July 1978, when 43 sheep were observed. One factor in the success of the sheep in this area is the presence of large natural rock "tanks" which trap water in the bottoms of a number of rugged, remote canyons. Several, including Ewe Tank, 39-Stick Tank, Indian Writing Tank, and Sheep Trap Tank occupy protected locations with northern exposures, and commonly contain water throughout the year. The rugged terrain limits competition for the water from deer and wild burros.

Approximately 24,000 acres of the WSA are included within the Picacho National Cooperative Land and Wildlife Management Area. BLM and CDFG have entered into a cooperative agreement which provides for special management consideration for wildlife values in such areas. The high quality deer and bighorn sheep habitat of the area was a major factor in this designation.

Wild, free-roaming horses and burros are found within the WSA, which is part of the Colorado River Herd Management Area. Management efforts are guided by a Herd Management Plan completed in 1984. The population of horses in the area is stable at about 40 animals, centered in two small herds on the river near Draper Lake and Picacho State Recreation Area (north and south of the WSA, respectively). Though centered in areas outside the WSA, the herds commonly wander into the Julian Wash country, especially when the river level is high and riverbank vegetation is unavailable for their use. In contrast to the horse population, the burro population is estimated to be growing by 23% annually. The present population of burros within the WSA and the area immediately north of it is estimated at between 500 and 600 head.

The rugged nature of the WSA limited its use by prehistoric Native Americans, but some cultural resources remain to indicate temporary hunting camps and passage of groups through the area. Though not present in great numbers, archaeological features include aboriginal trails, lithic scatters and core reduction areas (created by stone tool production), cleared circles (thought to be sleeping or meditation areas), potsherds, and isolated occurrences of petroglyphs. Some of the most significant archaeological remains are found in the Indian Pass Area of Critical Environmental Concern (ACEC), which is partially located within the WSA (see Map 1). In addition to the features mentioned previously, the ACEC contains a unique feature - "inscribed cobbles." These are dark-colored cobblestones containing miniature petroglyph inscriptions, often found near aboriginal trails. They may have been used to record the use of the trails by people or game, though their actual significance is unknown. The least disturbed examples of inscribed cobbles in the ACEC are within the non-WSA lands recommended for wilderness designation.

The Julian Wash country and nearby areas remain important to modern Colorado River area Native American groups, most notably the Quechan. Black Mountain is associated with Coyote (Kunyih) Clan rituals, and also contains burials. Other ritual and sacred localities are distributed throughout the area, often associated with permanent or semi-permanent water sources. Both the Quechan and the Chemehuevi continue to use WSA lands for hunting and gathering of traditionally-used plant resources. Eagle feathers are sometimes collected for ritual purposes in various parts of the WSA.

B. Diversity in the National Wilderness Preservation System (NWPS)

1. Assessing the diversity of natural systems and features as represented by ecosystems: The Indian Pass WSA contains 31,493 acres of the American Desert/Palo verde-cactus shrub (Cercidium-Opuntia) ecosystem. The flora and fauna of the area are influenced by its proximity to the Colorado River. The infusion of river species and species found principally to the east in Arizona make this area unusual in the CDCA. If designated, this wilderness would share with Imperial National Wildlife Refuge the distinction of preserving the southernmost Colorado River-influenced ecosystem in the NWPS.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas		Other BLM Studies	
	areas	acres	areas	acres
	NATIONWIDE			
American Desert/Palo Verde-Cactus Shrub	2	271,403	42	1,515,146
	CALIFORNIA			
American Desert/Palo Verde-Cactus Shrub	0	0	11	563,167

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of six major population centers. Table 3 summarizes the number and acreage of wilderness areas and other BLM study areas within a five-hour drive of these population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas areas	NWPS areas acres	Other BLM Studies areas	Other BLM Studies acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Tucson	41	2,547,144	78	2,263,137
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The closest designated area is the Joshua Tree Wilderness, managed by the National Park Service, approximately 70 air miles northwest. In addition, seven other BLM study areas recommended for wilderness designation are within 50 air miles, four in the California Desert District and three in Arizona's Yuma District.

C. Manageability

The Indian Pass WSA is manageable as wilderness. Manageability of the recommended wilderness area could be greatly enhanced through acquisition of valid existing rights. Several factors create significant differences in the ease of manageability between the recommended wilderness and nonwilderness portions of the study area.

Manageability of the recommended wilderness area would be greatly enhanced through acquisition of the valid existing rights, which would ensure that wilderness values could be permanently protected and maintained at their existing level. Significant portions of the recommended wilderness area have moderate to high potential for gold, silver, and tungsten. This portion of the WSA has 232 mining claims. To assure the long-term protection of existing high-quality wilderness values, it may be necessary to acquire the valid mineral rights. Otherwise, naturalness and opportunities for solitude will suffer as future mineral development occurs.

Natural topographic features which limit vehicle travel enhance manageability along the south, east, and west boundaries of the area recommended for wilderness designation, which includes 94% of the WSA and 891 acres of Federal land adjoining the WSA's south boundary. The east boundary is contiguous with lands proposed for wilderness in the Imperial National Wildlife Refuge, which further enhances manageability. The north boundary, which follows property lines, will require extensive posting to be identifiable on the ground, but patrol requirements will be low because of the very low level of use in the area. One State section and 14 acres of private land must be acquired for all lands within the recommended wilderness boundary to be in Federal ownership.

Lands recommended nonsuitable for wilderness were so recommended in order to increase wilderness manageability by excluding areas which contain numerous human alterations to the natural environment, and in which enforcement of vehicle closures would be extremely difficult due to the lack of natural barriers to vehicle access.

Motor Vehicle Use in Julian Wash

Julian Wash runs from west to east through the center of the WSA, about five miles. Julian Wash presently serves as a primitive vehicle way, providing public access to the interior of the WSA for recreational purposes, both motorized and nonmotorized. It also provides administrative access to a California Department of Fish and Game (CDFG) parcel, section 36, T. 12 S., R. 21 E. The wash is used by approximately 200 vehicles annually, mainly for day touring, rockhounding, hunting access, and access for primitive recreation.

The CDFG has proposed that in the event of wilderness designation, Julian Wash be excluded from the wilderness and thus remain open to motorized use. CDFG wishes to retain ownership of its parcel at the mouth of Julian Wash, and wishes to preserve vehicular access via Julian Wash for both administrative purposes and public access, primarily for deer and upland game hunting, but also for fishing on the Colorado River. (Although public fishing access was the original reason CDFG acquired this parcel, that objective faded in importance with the subsequent establishment of the Picacho State Recreation Area, which assures public boating and fishing access to the river in this general vicinity.)

Although this recommendation for continued motorized use of Julian Wash was not incorporated into the BLM wilderness proposal via a CDCA Plan amendment, it is a viable management option should Congress decide to accept it. In fact, motorized access in the wash would, in comparison to the proposed action, enhance the value of the wilderness area for weekend primitive recreation.

Points in Julian Wash presently serve as trailheads for hiking and backpacking. Unlike some wilderness areas, the Indian Pass WSA is not a major primitive recreation destination where people on vacation take extended trips. As is the case in most California Desert areas, existing backpacking use is primarily overnight trips on winter weekends. Because of the rugged topography of this WSA, the lack of formal trails, the necessity of carrying water, the distance traveled during backpack trips in this WSA is typically short. Some of the more scenic portions of the WSA are within two to three miles of Julian Wash, and convenient trailheads for day hikes and overnight backpack trips are where tributaries join the main wash. If motorized access is eliminated from Julian Wash, the area will be unreachable by many day hikers and overnight backpackers.

Motorized use has taken place in Julian Wash at low levels for decades. Physical barriers of rough topography have confined vehicle travel to the washes, so that the surrounding landscape remains unmarred by vehicle tracks. Because of these physical barriers and because use levels are low, confining vehicle traffic to the wash bottom would not be a difficult management task. Julian Wash appears capable of continuing to support low levels of motorized use without adverse impacts to the surrounding wilderness. If Julian Wash remains accessible to motor vehicles, measures will be developed to limit the amount of vehicle use to a level compatible with preserving wilderness values.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: Prior to publication of the CDCA Plan, BLM prepared a Geology-Energy-Mineral (G-E-M) Report for the Picacho G-E-M Resource Area (GRA), of which the Indian Pass WSA is a part. The GRA Report noted that the southwestern section of the WSA is a favorite area for gem and mineral collectors. The GRA Report indicates a high potential for the occurrence of copper mineralization in the southwestern portion of the WSA. The report cites copper mineralization within the northwestern section also. Geological reports on file describe mineral evaluation and occurrences in the Blue Star copper prospect in the southwest section of the WSA.

   Also noted in the GRA Report is a moderate potential for the occurrence of silver in the eastern and southern sections of the WSA. Walter Van de Mark, metallurgist and geologist in Riverside, California, reported in 1967, the occurrence of ore containing up to four percent copper and up to 23 ounces per ton of silver. George Quick, consulting geologist, reported in 1976, that the copper appears as djurleite and recommended further exploration and analysis. Edmond Lawrence, consulting mining geologist of West Lafayette, Indiana, reported in 1972, that copper is a secondary occurrence in the main appearing as chrysocolla. He concluded that there may be a large mineralized area below the surface outcrops of the copper minerals.

This WSA lies within the Picacho and Copper Basin mining districts. As of December 31, 1979, there were 20 mining claims recorded with the BLM.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Recommendation: From 1982 to 1985, the U.S. Geological Survey (USGS) and U.S. Bureau of Mines (BOM) conducted a mineral survey of the Indian Pass and Picacho Peak Wilderness Study Areas. The results of the USGS/BOM survey were published in 1987 as USGS Bulletin 1711-A. For the most part, the USGS bulletin supports the previous BLM GRA classifications; however, it recognizes new areas of mineral potential (shown on Map 2) recognizing new concepts in disseminated gold mineralization not recognized in the 1980 GRA Report. In the southwestern part of the WSA, there is a high potential for gold. The host rock for this gold is the quartz feldspathic gneiss of the upper plate of the Chocolate Mountains thrust plate that is the same host for Goldfields' gold operation 12 miles to the west of the WSA.

The northwestern section is classified as having a moderate potential for tungsten, gold, and silver. The northeastern portion of the WSA is classified as having a moderate potential for gold and silver.

Gem and mineral societies locally and in San Diego and Yuma have reported that the southwestern section of the WSA is highly rated as a mineral collecting area. Dumortierite, petrified wood, geodes, and mineral specimens have been collected in this section of the WSA. Under the BLM classification system, the southwestern portion of the WSA is considered as having a high potential for hobby gem and mineral collection.

Unpatented lode mining claims are concentrated in the recommended nonwilderness southwestern, and recommended wilderness western, southern, and northeastern portions of the WSA. Unpatented placer claims are concentrated in the recommended wilderness northeastern and south-central portions of the WSA. A millsite is located in the recommended wilderness south-central portion of the WSA. Unpatented mining claims located within the WSA and recorded with BLM as of December 1987, are summarized in the following table.

Table 4 - Mining Claims

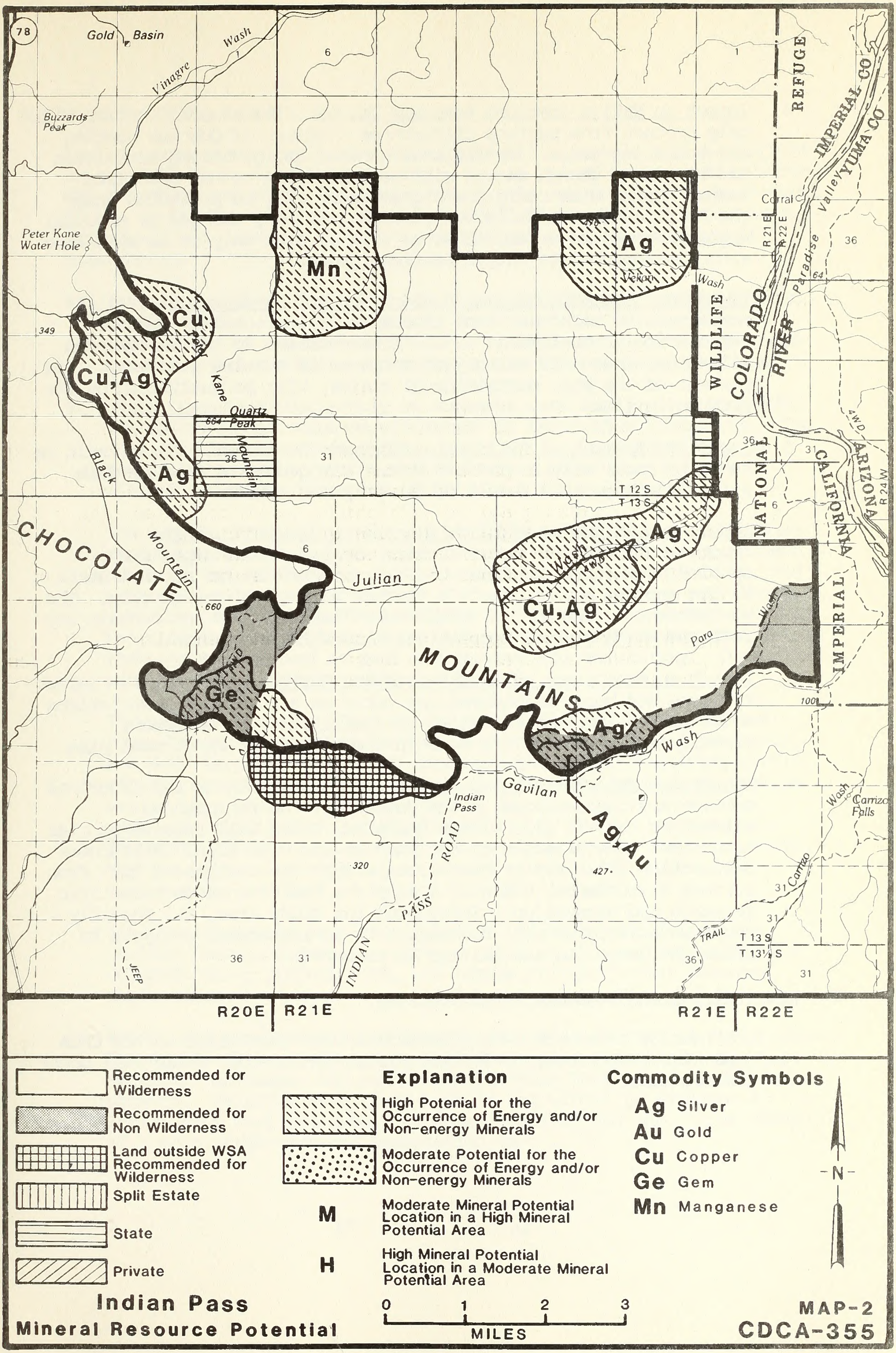
TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	224	31	255	4,480	620	5,100
Placer	8	1	9	320	40	360
Mill Site	1	0	1	5	0	5
Total	233	32	265	4,805	660	5,465

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: For 94% of the WSA plus 997 acres of contiguous public land to be designated wilderness, management will focus on maintaining the area's high quality wilderness values by excluding uses that are incompatible with wilderness management. However, values may be lost in areas of moderate to high potential for gold, silver, and tungsten through development of valid existing claims. On the six percent of the WSA to remain nonwilderness, where wilderness values have already been negatively affected by mineral prospecting and OHV recreation, these activities will continue to cause a gradual decline in wilderness values. On both the wilderness and nonwilderness portions of the WSA, military overflights will continue to occasionally disrupt solitude as they do at present.

2. Impact on Motorized Recreation: Approximately ten miles of off-highway vehicle routes will be closed, mainly in Julian Wash and its tributaries. The California Department of Fish and Game has recommended that Julian Wash itself remain open to motorized travel. If this recommendation is adopted by Congress, there will be minimal negative impacts to motorized recreation. If the recommendation is not adopted, a moderate negative impact to motorized recreation will result. Julian Wash is used by an estimated 200 vehicles annually, mainly for day touring and hunting access.

3. Impact on California Department of Fish & Game Administrative Access: The proposed action will restrict administrative access to the CDFG parcel to nonmotorized means only, which will have a major negative impact on CDFG's capability to effectively manage the parcel. This impact could be mitigated if Congress adopts CDFG's proposal to leave Julian Wash open to motorized travel, or if special language to allow CDFG motorized access were written into the legislation establishing the Julian Wash Wilderness.


78
Gold Basin
Vinagre Wash
Buzzards Peak
Peter Kane Water Hole
6
1
REFUGE
IMPERIAL CO
YUMA CO
Corral
R 21 E
R 22 E
Paradise Valley
64
36
Mn
Ag
Velan Wash
WILDLIFE
COLORADO
RIVER
NATIONAL
CALIFORNIA
ARIZONA
4WD
R 24 W
349
Cu
Cu,Ag
Peter Kane Mountain
Quartz Peak
664
36
31
Ag
Black Mountain
T12S
T13S
T 12 S
T 13 S
CHOCOLATE
MOUNTAINS
6
Julian Wash
660
Ge
Cu,Ag
Para Wash
IMPERIAL
100
Ag
Wash
Gavilan
Indian Pass
ROAD
INDIAN PASS
Ag,Au
427
320
Carrizo Falls
Wash
Carrizo
31
TRAIL
T 13 S
T 13½ S
36
31
JEEP
R20E
R21E
R21E
R22E
Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
Ag Silver
Au Gold
Cu Copper
Ge Gem
Mn Manganese
N
0
1
2
3
MILES

Indian Pass
Mineral Resource Potential

MAP-2
CDCA-355

4. Impact on Native American Uses and Values: The proposed action will help protect from surface disturbance a number of Quechan hunting and gathering areas. Traditional hunting and gathering activities can continue, though access will be restricted to non-motorized means. Sites with religious significance will be protected under the American Indian Religious Freedom Act. Any changes in physical appearance or use of sacred sites will be made only in consultation with the appropriate Native American group.

5. Impact on Locatable Mineral Exploration and Development: 32,147 acres will be withdrawn from mineral entry, precluding further exploration. Development of 234 mining claims in the recommended wilderness area will be subject to proof of a valid discovery. Six percent of the WSA, containing 32 claims, will be unaffected by the proposed action.

6. Impact on Habitat of California Ditaxis: No impact. The ditaxis is known to occur only in Gavilan Wash. Management of Gavilan Wash will not change as a result of the proposed action.

7. Impact on Habitat of Wildlife Species of Special Concern: Important habitat for deer, bighorn sheep, various amphibian species, and other wildlife will be preserved in its natural state to the maximum extent possible through wilderness designation. The six percent of the WSA to remain nonwilderness does not contain any features which give it special value as wildlife habitat.

8. Impact on Management of Wild Horses and Burros: Some adverse impact to horse and burro management may occur as a result of restrictions on mechanized equipment. Final determinations on management techniques allowed will be made in the wilderness management plan.

9. Impact on Archeological Resources: Resources such as the inscribed cobbles are concentrated in the portion of the recommended wilderness that is also within the ACEC, which will receive special management consideration as outlined in the CDCA Plan. Wilderness designation will help protect sites within the designated area from surface disturbance, but will also place limitations on scientific research and excavation. Throughout the study area, all formally proposed activities will be subject to environmental analysis to allow the detection and salvage of resources.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA-Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Known inaccuracies are noted in parentheses.

1. Inventory Phase: Comments pointed out the extent of man's imprint in the northern and southwestern portion of the units and the naturalness of the core of the area. Field checks confirmed these comments, and appropriate changes to the WSA boundary were made.

2. Study Phase: Approximately 90 comments were received on this WSA. The majority, 54, opposed wilderness in favor of multiple use. The desire to continue prospecting, rockhounding, and other hobbies requiring vehicular access was given as a major reason for discontinuing consideration of this area for wilderness.

   The scenic, archaeological, and wildlife values of the area's wash systems were mentioned by many rockhound enthusiasts who use these areas to explore for and collect jasper, agate, dumortiertite, and petrified palm root and fiber. Many felt that, at the very least, a vehicle corridor into the beautiful Julian Wash was needed for this recreation. The Wallace geode beds were also mentioned. The Julian Wash was also viewed as good for prospecting and mining. Copper and perlite mineralization exist in this WSA.

   It was said that excellent opportunities for family camping and four-wheel-driving exist in the area, and hunting for dove, quail, and deer is good. Boy Scout camping expeditions, requiring partial vehicle access, have occurred here. A comment was made that there are no true roads in Imperial County outside the farming areas; ways are primitive and constantly eroded by flash floods but are important as motorized vehicle access for hunting, fishing, mining, boating, etc. Rockclimbing among the area's crumbly rocks is treacherous, and lack of water precludes hiking.

   Other multiple-use concerns included: right-of-way access for Pacific Telephone Company, rip-rap sites on the eastern border for Colorado River project work, and access for geothermal resource exploration.

   Wilderness proponents noted several qualities in need of protection: The area's diverse vegetation includes cholla (Opuntia bigelovii), mesquite, creosote, and palo verde; Gavilan Wash contains California ditaxis. Milpitas Wash (this wash is not within or adjacent to the Indian Pass WSA) has excellent scenic variety and the finest example of a palo verde-ironwood association in

California, with significant scientific and educational value; and Julian Wash has high scenic and archaeological values. Several suggestions were made to include Vinagre Wash for wilderness consideration.

Wilderness proponents also noted the presence of the Colorado River toad, the Great Plains toad, the tree lizard, and the Yuma rattlesnake (BLM is not aware of the existence of any subspecies with the common name of "Yuma rattlesnake"). The penetration of Colorado River flora and fauna into this area's washes is a rare California Desert phenomenon that warrants protection from vehicle damage. The proximity of the Colorado River also provides a unique recreational opportunity to combine canoeing and wilderness hiking into a "special area with a unique flavor." Some respondents noted that river-oriented wash areas were rare among California Desert wilderness candidates and that extensions to protect wash areas to the north and buffers to the wildlife preserve were needed, with exclusions for microwave towers and mining scars, and arrangements made for Southern Pacific land exchanges.

Eighteen comments were received in response to the Public Input Workbook (3/15/79). Seventeen supported wilderness classification for the area; several recommended extending the area northward to take in the "checkerboard" area. Other pro-wilderness comments were similar to those noted earlier. One letter requested that existing access routes be left open.

3. Draft Plan Alternatives: The County of Imperial Planning Department recommended that this area be designated for moderate-intensity multiple-use management, in order to conform with the County General Plan which calls for recreation use in this location. The Marine Corps Air Station in Yuma noted that low level, high speed air routes cross this WSA. The National Outdoor Coalition (NOC), a coalition of mining, rockhounding, and ORV groups, recommended wilderness designation for most of the WSA. The Sierra Club favored wilderness status for the entire WSA. Members of these organizations sent in thousands of letters and coupons supporting these positions.

4. Proposed Plan: Comments and positions of governmental agencies and special interest groups were similar to those described above.

APPENDIX 1
ESTIMATED COSTS OF ACQUISITION OF NON-FEDERAL HOLDINGS WITHIN AREAS RECOMMENDED FOR DESIGNATION
INDIAN PASS WSA (CDCA-355)

PARCEL No.	LEGAL DESCRIPTION TWNSHP	RNG	SEC	MERIDIAN	TOTAL ACREAGE	NUMBER OF OWNERS	TYPE OF OWNERSHIP BY ESTATE SURFACE ESTATE	SUBSURFACE ESTATE	PRESENTLY PROPOSED FOR ACQUISITION	PREFERRED METHOD OF ACQUISITION	ESTIMATED COST OF ACQUISITION LAND COSTS ($1000)	PROCESSING COSTS ($1000)
1	12S.	10E.	36	SBM	640	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
2	12S.	20E.	15	SBM	14	1	PRIVATE	PRIVATE	YES	EXCHANGE	N/A	4.0

These figures were derived from Bureau Land Records and provide for more detail than GIS estimates and therefore may differ from acreage summaries in Table 1.

Picacho Peak

CDCA 355A

PICACHO PEAK (GAVILAN) WILDERNESS STUDY AREA (WSA)

(CDCA-355A)

1. THE STUDY AREA --- 5,958 acres

The Picacho Peak WSA is located in eastern Imperial County, in the southeastern corner of the California Desert Conservation Area (CDCA). The nearest cities are Brawley, 50 miles east; Blythe, 40 miles north; and Yuma, Arizona, 25 miles south. The study area consists entirely of 5,958 acres of public land under the jurisdiction of the Bureau of Land Management (BLM) (see Map 1 and Table 1).

The WSA is bounded by public lands on all sides except for the northeast corner, where it adjoins Picacho State Recreation Area. The west WSA boundary follows the Indian Pass Road to Indian Pass, which is located at the northwest corner of the study area. From there the north WSA boundary follows Gavilan Wash for approximately two and a half miles, then swings south to avoid an area lacking wilderness characteristics. The boundary then follows a major unnamed tributary of Gavilan Wash east to the Picacho State Recreation Area boundary, which it follows for approximately one mile until it meets Carrizo Wash, which forms the east WSA boundary. The south WSA boundary is formed by a line that leaves Carrizo Wash approximately four miles upstream, heading cross country due west until it meets a primitive way, which it follows further west approximately one mile to Indian Pass Road.

Two-wheel drive vehicle access to the west edge of the WSA is available from County Road S34 (Ogilby Road) via Indian Pass Road. Four-wheel drive vehicle access is available to most sections of the northern, southern, and eastern boundaries. The Indian Pass (Julian Wash) WSA is located immediately to the north, separated from Picacho Peak WSA by Indian Pass Road and a narrow band of land impacted by mining activity.

The WSA encompasses three distinctive topographic units. The central and western portions of the area are dominated by a massive range of dark gray mountains extending southeast from Indian Pass. Mica Peak, the highest point in the WSA at 1,400 feet, is located near the center of this range. South of the central mountains is a rolling benchland composed of alluvial material washed down from the peaks to the north. Though the landscape at first appears to be gently rolling, hikers quickly discover that it has been deeply dissected by narrow, vertical walled arroyos which complicate cross country travel. The third distinctive topographic region within the WSA is the northeastern area of small peaks, open basins, and large washes. Light colored tuff deposits lend a mottled or calico aspect to the landscape in this section. The lowest elevations in the WSA (320 feet) occur in Gavilan and Carrizo Washes on the east boundary of the WSA. The Indian Pass Area of Critical Environmental Concern is partially within the WSA. It was designated to provide special management emphasis and protection for important cultural resources (see Special Features). Vegetation is discussed in the Special Features and Diversity Section.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EISs) for the CDCA Plan, protection, use, balanced, and no action, and a summary of the area's wilderness values was included in Appendix III of the Final EIS. This recommendation also included an additional 1,724 acres of contiguous public lands outside the study area within the proposed wilderness.

2. RECOMMENDATION AND RATIONALE ---	5,455	acres recommended for wilderness
	2,179	BLM acres recommended for nonwilderness

Partial wilderness is the recommendation for this WSA. A total of 1,676 acres of contiguous public lands outside the WSA are also recommended for wilderness designation. The 2,179 acres in this WSA recommended nonsuitable are released for uses other than wilderness. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The partial wilderness recommendation is based on the following rationale: (1) The area recommended for wilderness exemplifies the definition of wilderness outlined in section 2(c) of the Wilderness Act; (2) the area recommended for wilderness is important wildlife habitat, ecologically unique among California Desert District WSAs; (3) the area's recreation and wildlife values have been previously recognized by other actions, and wilderness designation would further enhance the maintenance of these values; (4) although it was recognized that wilderness designation would create conflict with the area's mineral potential, it was determined that the area's wilderness values were more significant than its mineral resource values; and (5) the areas recommended for nonwilderness exhibit lower quality wilderness values than the rest of the study area, such that resolution of the mineral conflicts could not be justified.

The lands recommended for wilderness designation possess an outstanding primitive character as defined by the Wilderness Act. The land retains its "primeval character and influence, without permanent improvements or human habitation." Opportunities for hiking, backpacking, exploring and other primitive and unconfined types of recreation are limited only by the stamina of the visitor. Low visitation and the screening effect of a rugged topography ensure ample opportunities for the seeker of solitude. Excellent scenic quality and opportunities to view Nelson's bighorn sheep and view or hunt burro mule deer contribute significantly to the appeal of this primitive region. Because wilderness values are so significant, the suitability recommendation will preclude any further vehicular use of approximately one mile of primitive access routes of travel.

The lands outside the WSA boundaries recommended for wilderness possess wilderness values that fully equal those within the WSA. Their exclusion from the study area was an oversight that should be corrected. Furthermore, the addition of these lands will contribute to a more readily manageable wilderness boundary, and will fully incorporate important natural features, such as Carrizo Falls. The boundary of the original wilderness study area cuts Carrizo Falls in half, with one wall of the canyon inside and the other wall outside the WSA.

Wilderness designation of the recommended area would protect important wildlife habitat. The fauna and flora of the area are influenced by the proximity of the Colorado River, which passes less than a mile from the east boundary of the WSA and has resulted in an environment uncommon within the California Desert. Here, typical desert plant and wildlife species co-exist with species common to a riverine environment and to the deserts further east in Arizona. The area's outstanding wildlife habitat for Nelson's bighorn sheep and burro mule deer led to its inclusion within the Picacho National Cooperative Land and Wildlife Management Area, which is administered under a cooperative agreement between BLM and the California Department of Fish and Game. The area's outstanding wildlife and recreation values were also recognized by BLM in 1970, when 5440 acres of the WSA and contiguous lands were segregated from appropriation under the mining laws. Approximately 1700 acres of the segregated lands, including Carrizo Falls and Carrizo Spring, are within the recommended wilderness area.

Wilderness designation would compliment management of Picacho State Recreation Area by augmenting the recreation alternatives existing there with additional opportunities for primitive recreation. Recreation Area lands adjacent to the WSA are managed primarily for primitive recreation. Approximately 700 acres in the eastern portion of the WSA are managed cooperatively by the State Recreation Area and BLM through a cooperative agreement.

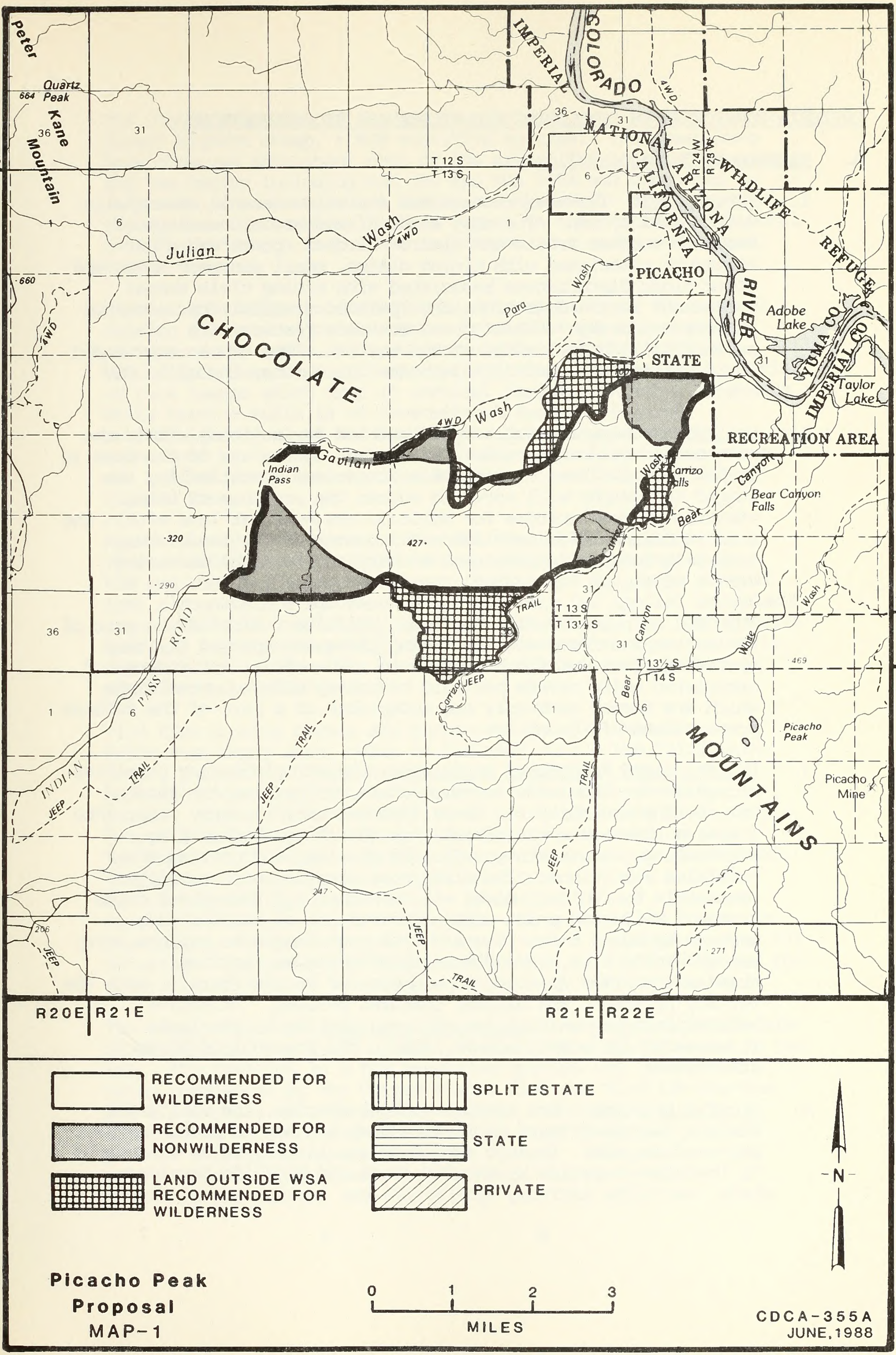
Portions of the lands recommended for wilderness appear to have high potential for gold, mineral and energy resources. It is likely that some of the many claims in the recommended wilderness area contain developable resources. Development could result in significant cumulative adverse impacts to the wilderness values (See Manageability).

In the event that Congress designates this WSA as wilderness, BLM recommends that the area be renamed "Gavilan Wilderness." This name is more appropriate for the area than "Picacho Peak," since the latter feature is situated several miles outside of the proposed wilderness area. The WSA forms the southern portion of an area commonly referred to as the "Gavilan Wash area." Gavilan Wash forms part of the northeastern boundary of the WSA, and a survey benchmark designated "Gavilan" occupies a promontory within the WSA.

Four portions of the WSA are recommended for nonwilderness. These lands contain surface disturbances and vehicle ways related to prospecting activity, and receive moderate levels of off-highway vehicle recreational use. These previous impacts to naturalness make it undesirable to incur the expense of resolving the mineral resource conflicts, which would involve validity examination of 84 existing mining claims, and acquisition of at least some of the valid rights to maintain wilderness values. By excluding the four parcels from the wilderness recommendation, manageability of the recommended wilderness area is enhanced. The proposed wilderness boundary follows natural barriers which will preclude further vehicle encroachment, and excludes lands disturbed by prospecting activity.

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	5,958
Split Estate	(BLM surface only)	0
Inholdings		
State		0
Private		0
Total		5,958
Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	3,779
BLM	(outside WSA)	1,676
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		5,455
Inholdings		
State		0
Private		0
Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	2,179
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		2,179


Peter
Quartz Peak
664
Kane Mountain
36
31
T 12 S
T 13 S
IMPERIAL
COLORADO
NATIONAL
WILDLIFE
REFUGE
4WD
CALIFORNIA
ARIZONA
R 24 W
R 23 W
36
31
6
1
Julian
Wash
4WD
660
CHOCOLATE
Para
Wash
PICACHO
STATE
RECREATION AREA
RIVER
Adobe Lake
YUMA CO.
IMPERIAL CO.
Taylor Lake
Gavilan
Wash
4WD
Indian Pass
320
427
290
Carrizo Falls
Wash
Canyon
Bear Canyon Falls
Bear
Carrizo
TRAIL
T 13 S
T 13½ S
31
Canyon
Bear
31
T 13½ S
T 14 S
6
White
Wash
469
209
T 13 S
T 13 1/2 S
T 14 S
36
31
ROAD
PASS
INDIAN
JEEP
1
6
TRAIL
JEEP
TRAIL
Carrizo
JEEP
1
TRAIL
JEEP
MOUNTAINS
Picacho Peak
Picacho Mine
247
206
JEEP
JEEP
TRAIL
271
R20E
R21E
R21E
R22E
☐ RECOMMENDED FOR WILDERNESS
▒ RECOMMENDED FOR NONWILDERNESS
▦ LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
▥ SPLIT ESTATE
▤ STATE
▨ PRIVATE
N
0
1
2
3
MILES

Picacho Peak Proposal
MAP-1

CDCA-355A
JUNE, 1988

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The area recommended for wilderness is essentially untrammeled by man. The only signs of man are archaeological features such as trails and cleared circles, posts and other monuments associated with mining claims, small prospect holes and other minor disturbances associated with mining claim annual assessment work. Some vandalism (painted graffiti) has occurred at Carrizo Spring. All of these man-made features are substantially unnoticeable within the WSA. The areas recommended for nonwilderness contain more human intrusions, including OHV trails and mining scars.

2. Solitude: There are ample opportunities for solitude within the recommended wilderness area. At present, human use of the area is at low levels. Even if visitation increases dramatically, the rugged topography will serve to screen the presence of other visitors. Opportunities for solitude are somewhat less within the area recommended for nonwilderness, because these lands are generally located in more open country and lack the screening effect of rugged topography.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: Opportunities for primitive recreation in the lands recommended for wilderness are limited only by the necessity for the wilderness user to carry water into the area. Possible activities include hiking, backpacking, sightseeing, nature study, wildlife viewing, and hunting under primitive conditions. The wilderness study area is readily accessible to recreationists via two-wheel and four-wheel drive routes. While any point within the WSA can be reached on a weekend backpack trip, it would take much longer to explore every aspect of the area. The diversity of the area requires considerable time in order to explore and become familiar with the variety of scenic and natural features present. Primitive recreation opportunities are of lower quality in the lands recommended for nonwilderness, due to the presence of human intrusions.

4. Special Features: One sensitive plant species, the California ditaxis, has been found in Gavilan Wash and may be found in other parts of the WSA. It is a candidate for listing as an endangered or threatened species by the U.S. Fish and Wildlife Service.

The rugged mountains of the WSA also provide good habitat for the desert bighorn sheep, a BLM sensitive species. The sheep have been observed throughout most of the area. The latest CDFG census for the region including WSA 355 and WSA 355A was conducted in July 1978, when forty-three sheep were observed. One factor in the success of the sheep in this region is the presence of natural rock "tanks" which trap water in bottoms of a number of rugged, remote canyons.

Carrizo Wash supports one of these natural tanks at the base of Carrizo Falls, a major attraction to visitors in the eastern portion of the lands recommended suitable. At Carrizo Falls, runoff from desert cloudbursts periodically cascades over a series of rock ledges which drop 40 vertical feet in an eighth of a mile. While Carrizo Falls is an intermittent feature, a large cattail-lined pool at the base of the falls is permanently maintained by Carrizo Spring. This desert oasis provides water and habitat for a variety of wildlife species including desert bighorn sheep.

Approximately 5,100 acres of the WSA are included within the Picacho National Cooperative Land and Wildlife Management Area. BLM and the California Department of Fish and Game have entered into a cooperative agreement which provides for special management consideration for wildlife values in such areas. The high quality deer and bighorn sheep habitat of the area was a major factor in the inclusion of the area within the cooperative wildlife management designation.

Wild free roaming horses and burros are found within the Wilderness Study Area, which is included within the California Desert District's Colorado River Herd Management Area. The population of horses in the area is stable at about forty animals, centered in two small herds on the Colorado River near Draper Lake (to the north) and Picacho State Recreation Area (adjacent to the WSA). Though centered in areas outside the WSA, the Picacho State Recreation Area herd commonly uses Carrizo Spring, especially when the river level is high and riverbank vegetation is unavailable for forage. In contrast to the horse population, the burro population is estimated to be growing by 23% annually. The present population of burros within the WSA and the areas surrounding it is estimated at between 500 and 600 head.

The Desert tortoise (Gopherus aggassizi), the official California State Reptile, has found a niche in the soft volcanic soils in the WSA. The tortoise is a BLM sensitive species and is currently being considered by the United States Fish and Wildlife Service for eligibility as a threatened species. Tortoises live in underground burrows which shelter them from the summer sun and provide a place to hibernate in the winter. These burrows are often found under perennial bushes where the root systems stabilize the burrow, and the foliage provides additional shade.

Cultural resources consist of temporary camps and other evidence that prehistoric peoples passed through the area. Archeological features include aboriginal trails, lithic scatters and reduction areas (associated with stone tool production), potsherds, and cleared circles (thought to be sleeping or meditation areas). Some of the most significant archeological remains are found in the Indian Pass Area of Critical Environmental Concern (ACEC) which is partially located within the WSA. In addition to the features mentioned previously, the ACEC contains a unique feature -- "inscribed cobbles." These are dark colored cobblestones containing miniature petroglyph inscriptions, often found near aboriginal trails. The cobblestones may have been used to record the use of the trails by people or game, though their actual significance is unknown.

B. Diversity in the National Wilderness Preservation System (NWPS)

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 5,958 acres of the American Desert/Palo Verde-cactus shrub (*Cercidium-Opuntia*) ecosystem. The flora and fauna of the area are influenced by its proximity to the Colorado River. The infusion of river species and species found principally to the east in Arizona make this WSA and the adjacent WSA 355 unusual in the CDCA. If designated, WSA 355A would share with WSA 355 and the Imperial National Wildlife Refuge the distinction of preserving the southernmost Colorado River influenced ecosystem in the NWPS. Outstanding habitat for burro mule deer and Nelson's bighorn sheep is included.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas		Other BLM Studies	
	areas	acres	areas	acres
	NATIONWIDE			
American Desert/Palo Verde-Cactus Shrub	2	271,403	42	1,539,788
	CALIFORNIA			
American Desert/Palo Verde-Cactus Shrub	0	0	11	587,809

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of six major population centers. Table 3 summarizes the number and acreage of wilderness areas and other BLM study areas within a five-hour drive of these population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS areas areas	NWPS areas acres	Other BLM Studies areas	Other BLM Studies acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Tucson	41	2,547,144	78	2,263,137
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The closest designated area is the Joshua Tree Wilderness at Joshua Tree National Monument, approximately 75 air miles northwest. There are seven BLM study areas recommended for wilderness designation within 50 air miles of Picacho Peak WSA. Four are within the California Desert District and three are within Arizona's Yuma District.

C. Manageability

The Picacho Peak WSA is manageable as wilderness. Manageability of the recommended wilderness area could be greatly enhanced through acquisition of valid existing rights. Additional factors create a significant difference in ease of manageability between the portion recommended for wilderness and the portion recommended for nonwilderness.

The boundaries of the area recommended for wilderness, which includes the contiguous lands outside the WSA, have been drawn to follow physical features that make the boundary readily identifiable and enforceable. As it has in the past, the area's rugged terrain will continue to protect the existing high quality wilderness values from motorized intrusions.

The areas recommended for nonwilderness are in more open country, where it would be more difficult to ensure against vehicular trespass. Because of the relative ease of access, this area contains more primitive ways than the recommended wilderness portion.

Significant portions of this WSA have moderate to high potential for gold and silver (See Energy and Mineral Resource Values). The WSA has 306 mining claims, slightly over two-thirds of which are in the recommended wilderness area. To assure the long-term protection of existing high quality wilderness values, it may be necessary to acquire the valid mineral rights. Otherwise, naturalness and opportunities for solitude will suffer if future mineral development occurs.

To be more descriptive the designation of the suitable area should carry the name "Gavilan".

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: Prior to publication of the CDCA Plan, in 1980 BLM prepared a Geology-Energy-Mineral (G-E-M) report for the Picacho G-E-M Resource Area (GRA), of which the WSA is a part. (The Picacho GRA Report is a BLM administrative report available in the California Desert District G-E-M resource files). The Picacho GRA Report indicates that the north half of the WSA has moderate potential for the occurrence of gold and silver, and that the north half also has a low potential for the occurrence of industrial mineral resources. The south half of the WSA was not classified due to lack of sufficient data. BLM mining claim records dated December 31, 1979, identified at least 13 unpatented mining claims within the WSA.

   The GRA Report references the 1977 California Division of Mines and Geology (CDMG) County Report No. 7, Geology and mineral resources of Imperial County, California. The CDMG Report identifies two copper occurrences in the southeastern extension of a belt of copper-bearing rocks (diorite intrusions and aplite dikes in the metamorphic rocks of the McCoy formation). In the central and western portions of the WSA, a large body of hydrothermally altered schist of the Orocopia formation was noted to contain uranium and rocks bearing clay deposits.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Recommendation: The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (BOM) conducted mineral surveys of the Indian Pass and Picacho Peak WSAs during the period from 1982 to 1985. A joint report was published in 1987 as USGS Bulletin 1711-A. This new data, not available during the development of the CDCA Plan, upgraded the quality of the mineral data regarding the WSA. Map 2 shows areas of potential for the occurrence of mineral resources based on the USGS and BOM mineral surveys under the BLM mineral classification system. Bulletin 1711-A delineated the north central and southeastern section of the WSA as having a high potential for gold. This assessment, as well as a high potential for silver, is confirmed by recent BLM mineral examinations. Five major mining companies conducted drilling and assay activities in the WSA in 1987. Mineralization is exposed in the Orocopia schist of the Chocolate Mountain thrust plate. Copper occurs in the Winterhaven Formation throughout the WSA and in quartz pods and lenses within the Orocopia schist.

CDMG County Report No. 7 lists mines and production throughout the county from the late 1800s until 1977. These records of previous production help substantiate the current mineral potential classifications. In the northeastern part of the WSA gold and silver was produced. The silver assayed at 90 ounces per ton in one mine. Production figures were not given for this 1896 operation. Gold was produced from the southeastern part of the WSA as late as 1962. Ten tons of copper carbonate were shipped from the WSA in 1968, the area's only recorded copper production. The ore assayed at 0.07 oz/ton gold, 7.58 oz/ton silver and 15.86% copper. Three mining claims located in 1959 in the southwest portion of the WSA produced dumortierite (semi-precious gemstone) and petrified wood. This area should be considered as having a high potential for the occurrence of gems and hobby collecting mineral materials.

According to BLM records dated December 1987, numerous unpatented mining claims encumbered both the recommended suitable and nonsuitable areas of the WSA, as summarized in the following table.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	208	81	289	4,160	1,620	5,780
Placer	14	3	17	560	120	680
Mill Site	0	0	0	0	0	0
Total	222	84	306	4,720	1,740	6,460

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Although the wilderness area will be withdrawn from mineral entry, some of the existing mining claims will prove to have a valid discovery, allowing development to proceed with associated negative impacts on wilderness values, unless valid rights can be acquired. With the above exceptions, wilderness values will be protected on the area to be designated wilderness. On the area to remain nonwilderness, wilderness values will experience a generalized decline over the long term as a result of mineral exploration and development, and motorized recreation.

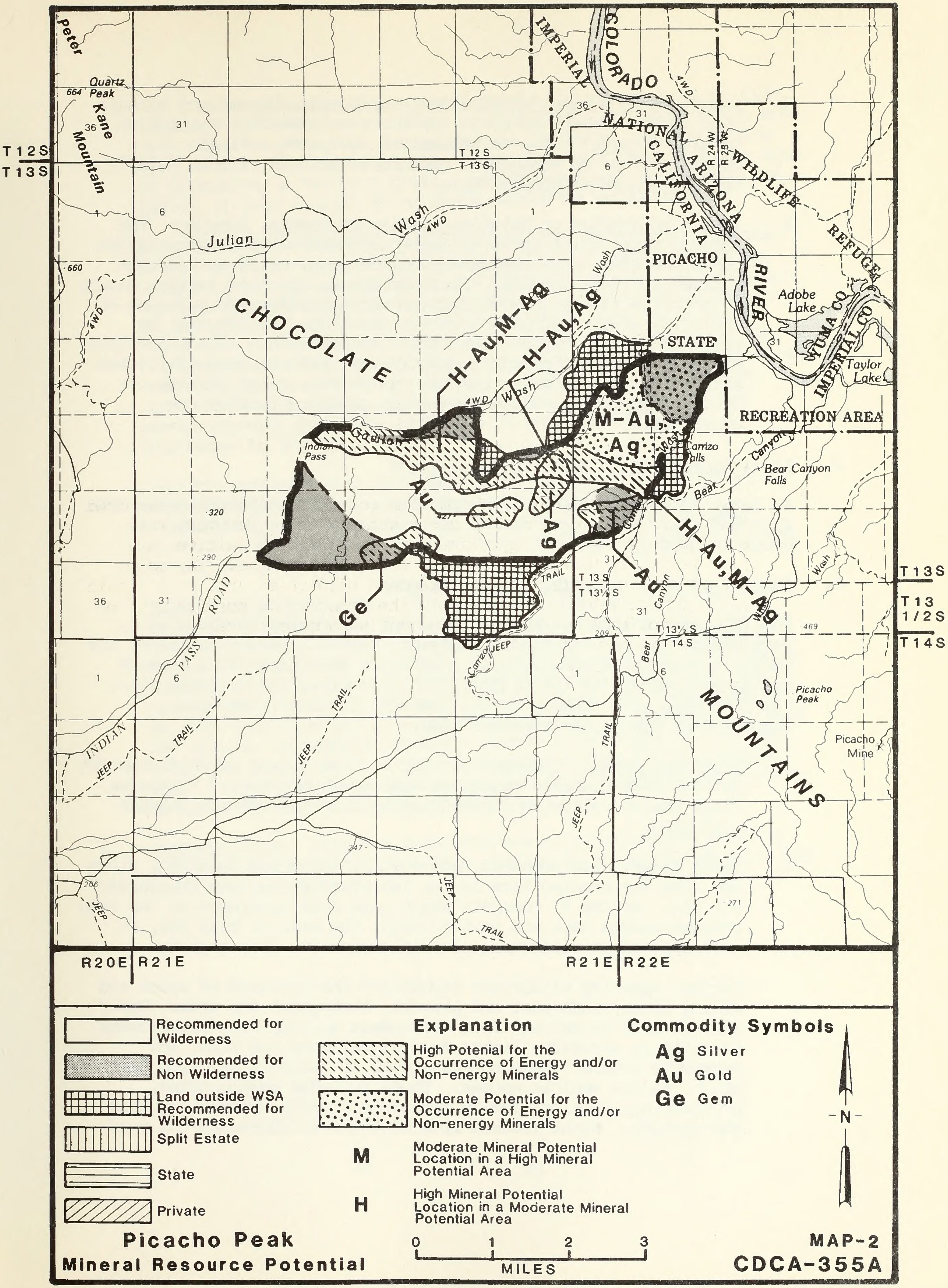
2. Impact on Mineral Exploration and Development: Approximately 5455 acres of the WSA will be withdrawn from mineral entry, precluding further exploration. Development of 222 existing mining claims will be subject to proof of a valid discovery. The remainder of the WSA, containing 84 mining claims, will be unaffected by the proposed action.

3. Impact on Motorized Recreation: The portion of the WSA designated wilderness will be closed to motor vehicle use. However, this acreage only contains approximately one mile of primitive way, plus tributary washes which serve as vehicle routes. The main washes on the boundary of the proposed wilderness area will remain approved for vehicle use. Within the nonsuitable portion of the WSA, approximately one mile of primitive access routes of travel will remain open to vehicular use.

4. Impact on Habitat of California Ditaxis: No impact. This plant is known to occur only on the WSA boundary in Gavilan Wash. Management of Gavilan Wash will remain unchanged by the proposed action.

5. Impact on Cultural Resources: Resources are concentrated in the portion of the WSA within the ACEC, which will receive special management consideration as outlined in the CDCA Plan. Wilderness designation will help protect sites within the designated area from surface disturbance, but will also place limitations on scientific research and excavation. Throughout the study area, all formally proposed activities will be subject to environmental analysis to allow the detection and salvage of resources; however, sites within the nonwilderness could be unintentionally damaged by casual OHV recreation activities.

6. Impact on Administration of the Picacho National Cooperative Land and Wildlife Management Area: No impact. The proposed action will not affect BLM's ability to carry out the terms of the cooperative agreement. Wilderness designation will help preserve wildlife habitat in its natural state.


Peter
Quartz Peak
664
Kane Mountain
36
31
T12S
T13S
T 12 S
T 13 S
IMPERIAL
COLORADO
NATIONAL
WILDLIFE
REFUGE
CALIFORNIA
ARIZONA
4WD
R 24 W
R 23 W
6
1
Julian
Wash
4WD
660
PICACHO
RIVER
Adobe Lake
YUMA CO.
IMPERIAL CO.
STATE
Taylor Lake
RECREATION AREA
CHOCOLATE
H-Au, M-Ag
H-Au, Ag
Wash
4WD
Gavilan
Indian Pass
M-Au, Ag
Carrizo Falls
Canyon
Bear Canyon Falls
Bear
Au
427
Ag
320
290
H-Au, M-Ag
Au
Ge
TRAIL
T 13 S
T 13½ S
31
Canyon
Wash
469
T13S
T13 1/2 S
T14S
36
31
ROAD
PASS
209
T 13½ S
T 14 S
Carrizo
JEEP
Bear
6
1
6
1
MOUNTAINS
Picacho Peak
Picacho Mine
INDIAN
JEEP
TRAIL
TRAIL
JEEP
TRAIL
JEEP
247
206
JEEP
JEEP
TRAIL
271
R20E
R21E
R21E
R22E
Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
Ag Silver
Au Gold
Ge Gem
N
0 1 2 3
MILES

Picacho Peak
Mineral Resource Potential

MAP-2
CDCA-355A

7. Impact on Management of Wild and Free Roaming Horses and Burros: Some adverse impact to horse and burro management may occur as a result of restrictions on mechanized equipment. Final determinations on management techniques allowed will be made in the wilderness management plan.

8. Impact on Habitat of Wildlife Species of Special Concern: The natural tanks which serve as important water sources for bighorn sheep are within the recommended wilderness, as is most of the habitat for this species. Deer and desert tortoise habitat occurs in both the recommended wilderness and nonwilderness portions of the study area. Within the wilderness area, habitat will be preserved in its natural condition to the maximum extent possible. Within the area to remain nonwilderness, all proposed activities will be subject to environmental analysis to avoid impacts, or develop appropriate mitigating measures where impacts are unavoidable.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Known inaccuracies are noted in parentheses.

1. Inventory Phase: Comments pointed out the extent of man's imprint in the Cargo Muchacho Mountains and other portions of this area. Field checks validated these comments, and appropriate changes were made.

2. Study Phase: Few comments specifically addressed this WSA, since the area was created late in the inventory phase from the larger WSA 355. Of the 37 comments which made some reference to the area between Gatuma Wash and Gavilan Wash, the area of this WSA, 25 were opposed to wilderness classification for this region.

   Letters opposing wilderness emphasized the presence of roads and mining sites, both past and present, throughout the area. Other factors said to detract from wilderness quality were overflights of military aircraft, lights from Winterhaven and Yuma, and microwave towers. Respondents wished to continue existing uses which require vehicle access. These included rockhounding, prospecting, hunting, family and group camping, picnicking, and photography. Eight letters from Winterhaven addressed the need for access by senior citizens and people who cannot hike or ride horseback into the area. Other reasons given for keeping the area open were the potential for geothermal resources and for mining gold, copper, and perlite. One respondent mentioned that the area is crossed by a "wetback trail," and recommended that access for patrol of this illegal alien route should be maintained.

Proponents of wilderness classification for this area cited its pristine nature and the opportunities for primitive recreation, including hiking, photography, and climbing, as well as enjoyment of solitude. The wash system permits the penetration of several Colorado River species of wildlife. Listed among the species found here were the Yuma kingsnake, Couch's spadefoot toad, the Rocky Mountain toad, the Great Plains toad, and the Colorado River toad. A rare plant, the California ditaxis, was also said to occur in Gavilan Wash. Five letters from desert conservation groups members urged the inclusion of the Cargo Muchacho Mountains in the WSA.

Only two comments were received in response to the Public Input Workbook of 3/15/79. One of these encouraged wilderness classification and expansion of the area. The other opposed wilderness because this is a favorite rockhounding area and there is not enough access.

3. Draft Plan Alternatives: The County of Imperial Planning Department recommended that this area be designated for moderate intensity multiple use, in order to conform with their General Plan which calls for recreation use in this location. The Marine corps Air Station in Yuma noted that low level, high speed air routes cross this WSA and should be accounted for. The National Outdoor Coalition (NOC), a coalition of mining, rockhounding, and OHV groups, recommended moderate intensity multiple use for the WSA. The Sierra Club favored wilderness status for the entire WSA. Members of these organizations sent in thousands of letters and coupons supporting their positions.

4. Proposed Plan: Comments and positions of governmental agencies and special interest groups were similar to those described in the preceding paragraph.

Little Picacho Peak

CDCA 356

LITTLE PICACHO PEAK WILDERNESS STUDY AREA (WSA)

(CDCA-356)

1. THE STUDY AREA --- 42,191 acres

Little Picacho Peak WSA is located in eastern Imperial County, near the southeast corner of the California Desert Conservation Area (CDCA). The nearest cities are El Centro, about 55 air miles west, and Yuma, Arizona, about nine air miles south. The study area includes 39,547 acres of public land under the jurisdiction of the Bureau of Land Management (BLM), 2,644 acres of State land and no acres of private land. (see Map 1 and Table 1).

On the west, south, and east the WSA adjoins other public lands administered by BLM where mining, quarrying for gravel and rip-rap, and motorized recreation have been the major activities. The WSA boundary was drawn to exclude areas where evidence of these activities is prominent and for most of its length is not aligned with any major physical feature. Exceptions are an approximate six mile segment of the east boundary, which follows the Ferguson Lake Road, and a one mile segment near the northwest corner which follows the Picacho Road. The north WSA boundary abuts Imperial National Wildlife Refuge and Picacho State Recreation Area. In its northeast corner near Ferguson Lake, the WSA borders BLM Yuma District's 2,915-acre Little Picacho Peak Addition WSA.

The WSA is readily accessible by vehicle. The infrequently graded Ferguson Lake Road is steep and rough, but marginally passable by two-wheel drive vehicle. Two ways intersecting this road reach deep into the interior of the study area. One is an unconstructed, unmaintained primitive way which parallels Senator Wash; the other is the bladed way to the now inactive Hess Mine, unmaintained but still two-wheel drive accessible. The study area can also be reached via the Picacho Road, a maintained dirt road which parallels the west side of the study area. From this road, two-wheel drive vehicles can also negotiate nearby Copper Basin Road and an unnamed route which leaves Picacho Road inside the state recreation area. From these two routes, primitive ways requiring an off-highway vehicle extend into the interior of the study area.

The Little Picacho Peak WSA incorporates the southern terminus of the Chocolate Mountains which extend some 70 miles to the northwest. Elevations within the WSA range from 200 to 1,523 feet. Topographic relief is more extreme than the range of elevations would suggest -- the area is characterized by jutting spires and steep ridges furrowed with ravines that gradually broaden into sandy, tree lined washes. Most ridges taper into peaks or hogbacks, but some are flat topped. Almost devoid of vegetation, the slopes and intervening plains are covered instead with a desert pavement of angular cobbles. These cobbles and the sheer rock faces of the peaks are predominantly a rusty dark orange to brown, contrasting with the nearly white wash bottoms and occasional light colored outcrops. Except for the washes, which support ironwood, mesquite, smoke tree, palo verde, and associated plants typical of desert microphyll woodland, the WSA's sparse vegetation consists of creosote bush scrub.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EISs) for the CDCA Plan, protection, use, balanced, and no action, and a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

0	acres recommended for wilderness
39,547	BLM acres recommended for nonwilderness

No wilderness is the recommendation for the Little Picacho WSA. The entire acreage in this WSA is released for uses other than wilderness. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The Little Picacho Peak WSA and surrounding area has long been used for motorized recreation, mining, and mineral exploration, and many sites within the WSA exhibit the physical evidence of such use. Numerous public comments received from both organized special interest groups and individual citizens urged that the Little Picacho WSA continue to remain available for motorized recreation and mining. BLM has concluded that the area's potential for these two uses outweigh its value as wilderness. There are approximately 30 miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use.

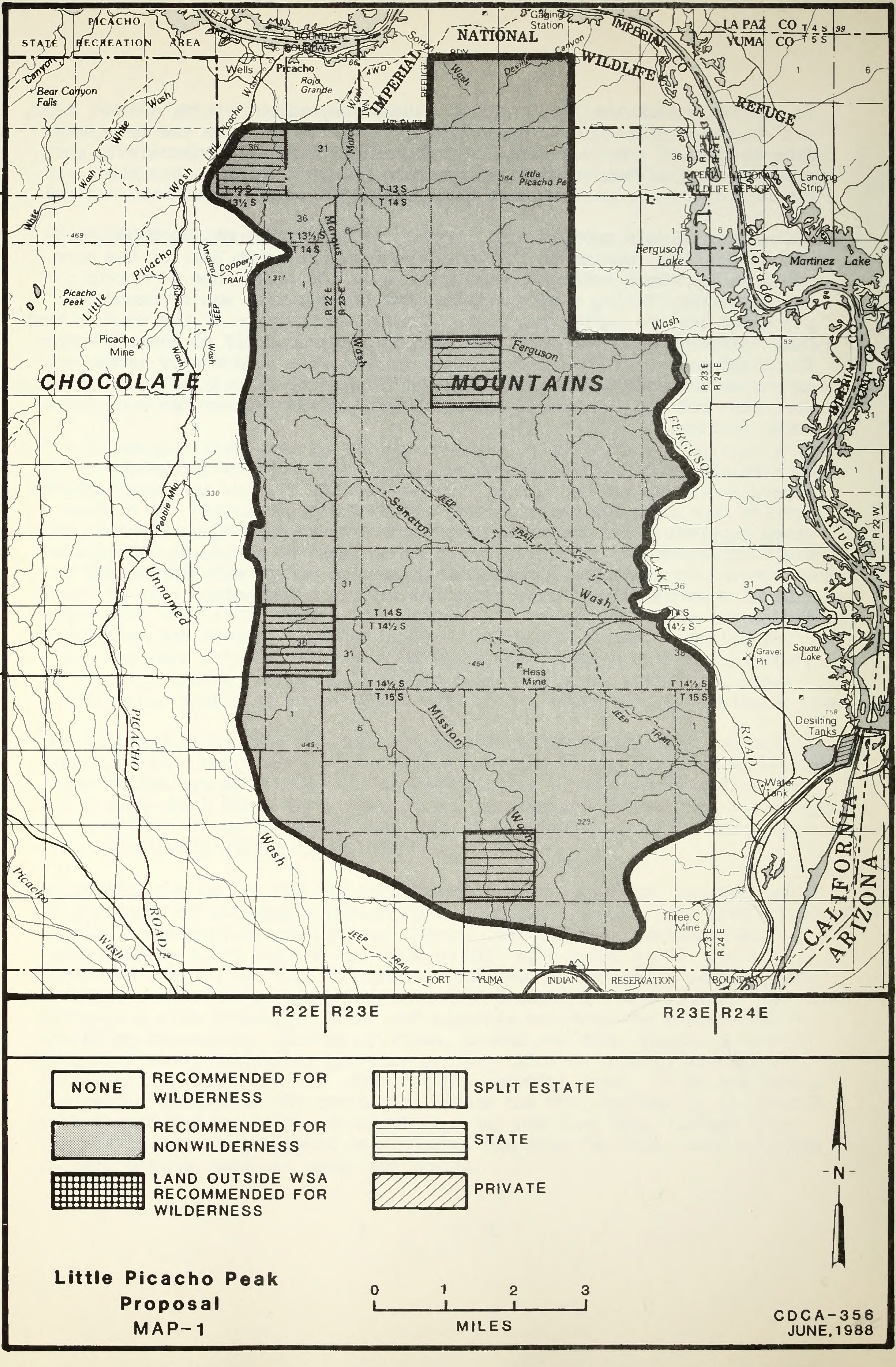
The Little Picacho Peak WSA does not provide unique wilderness recreation opportunities, nor would it be a unique addition to the National Wilderness Preservation System (NWPS). It is very similar to the nearby Indian Pass and Picacho Peak WSAs, both of which are recommended for partial wilderness designation. These other two WSAs show less evidence of prior human use than does Little Picacho Peak WSA.

Recreation use of the WSA has traditionally been motorized, use that would be displaced by wilderness designation. The WSA receives very little hiking or other nonmotorized recreation. Annual visitation is estimated at approximately 6,600 visitor use days (VUDs), with about 6,000 VUDs of motorized use and 600 VUDs of nonmotorized use. Off-highway vehicle (OHV) touring, rockhounding, and hunting are the predominant activities. The area contains a wide variety of rocks and minerals collected by rockhounds, including chalcedony, chalcedony roses, banded and moss agates, geodes, petrified wood, malachite, azurite, pyrite, calcite, quartz, hematite, dumortierite, and sodalite. Over the past several years, there has been a noticeable upsurge of OHV recreation within the WSA, apparently associated with increasing use of the adjacent Imperial Dam Long Term Visitor Area. The WSA is currently managed as a Limited Use Area for OHVs, with vehicles allowed only on approved roads and trails.

It is likely that the WSA contains valuable deposits of gold, silver, lead, and copper, which would be economically viable if the area were released from wilderness consideration. Although significant deposits are as yet undiscovered, effective exploration using modern techniques has been hampered by the requirements of the 43 CFR 3802 regulations.

Saleable materials such as sand, gravel, and rip-rap rock are abundant within the WSA. Sediments that cover most of the south half of the area could be used as a source of sand and gravel for fill, base, concrete aggregate, and tiling sand, assuming that the material was screened and processed for the latter two uses. During construction of the Senator Wash Dam in 1966-67, the Bureau of Reclamation removed basalt cobbles from the flanks of several ridges near the Hess Mine. This same agency later expressed interest in obtaining additional rip-rap material from the Mission Wash area but the Interim Management Policy for WSAs precluded such authorization.

Upon release from wilderness consideration, BLM proposes to manage approximately 90% of the Little Picacho Peak WSA for low intensity use, to provide continued limited motorized access while protecting the bighorn sheep population and its habitat and Native American values. An area in the southeastern corner comprising about ten percent of the total WSA will be designated for moderate intensity multiple use, to provide access for mineral development and more intensive motorized recreation.


PICACHO STATE RECREATION AREA
IMPERIAL NATIONAL WILDLIFE REFUGE
REFUGE BOUNDARY
Gaging Station
LA PAZ CO
YUMA CO
T 4 S
T 5 S
Bear Canyon Falls
Wells
Picacho
Roja Grande
4WD
Senator Wash
Devils Canyon Wash
White Wash
Little Picacho Wash
Little Picacho Peak
Picacho Peak
Picacho Mine
Arrastra Wash
Copper TRAIL
JEEP
Burro Wash
Marcus Wash
CHOCOLATE
MOUNTAINS
Ferguson Wash
FERGUSON LAKE
Ferguson Lake
Martinez Lake
Landing Strip
Colorado River
Pebble Mtn
Unnamed Wash
PICACHO ROAD
Picacho Wash
Senator Wash
JEEP TRAIL
Hess Mine
Mission Wash
Gravel Pit
Squaw Lake
Desilting Tanks
Water Tank
ROAD
Three C Mine
FORT YUMA INDIAN RESERVATION BOUNDARY
CALIFORNIA
ARIZONA
T 13 S
T 14 S
T 13½ S
T 14½ S
T 15 S
T13S
T14S
T15S
R 22 E
R 23 E
R 24 E
R 22 W
R22E R23E
R23E R24E
1
6
31
36
469
311
330
186
449
464
323
364
158
129
99
NONE
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
0
1
2
3
MILES
N

Little Picacho Peak Proposal
MAP-1

CDCA-356
JUNE, 1988

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	39,547
Split Estate	(BLM surface only)	0
Inholdings		
State		2,644
Private		0
Total		42,191

Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	0
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		0
Inholdings		
State		0
Private		0

Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	39,547
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		39,547

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: Even with this WSA's highly dissected topography, human impacts of one sort or another are widespread enough that it is rare to find a vista totally free of them. The most prevalent signs of human activity are prospect holes, old bladed access routes, and other minor surface disturbances on mining claims. Although few in number, primitive vehicle ways are highly visible where they cross desert pavement areas within the WSA. The passage of vehicles has disturbed the relatively dark pavement surface and exposed the very light colored underlying soil.

Significant alteration of natural conditions prevails around the now inactive Hess Mine in the south-central portion of the WSA. About 140 acres surrounding the mine were stripped in the 1960s to supply rip-rap material for the Bureau of Reclamation. In addition, the area contains abandoned structures and machinery and old mine shafts. However, while the mine is highly visible from outside the WSA, surrounding peaks effectively screen it from most locations inside the study area.

On May 8, 1981, BLM employees discovered a newly constructed access road at the northern end of the WSA, 2.8 miles long, leading to a mining claim in Section 28, T13S, R23E. This road was not part of an approved plan of operations and was consequently in noncompliance with 43 CFR 3802.1-1(a). BLM determined that the access road had caused impairment of the wilderness characteristics of the WSA, in violation of 43 CFR 3802.3-2(g). The responsible claimant has been notified that the road must be reclaimed to a substantially unnoticeable condition by June 30, 1989.

2. Solitude: There are many opportunities for solitude, particularly away from motor vehicle access points. The rugged topography helps to screen visitors from each other.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: Opportunities exist for activities such as hiking, backpacking, sightseeing, nature study, photography, and hunting. Visitors must carry their own water into the area.

4. Special Features: The precipitous terrain of the WSA is ideal cover for desert bighorn sheep. The WSA provides about 70% of the total range for the Picacho Peak herd, which numbers approximately 25 head.

   Wild, free roaming horses and burros also inhabit the WSA. Numbering up to 25 head, the Picacho wild horse herd ranges over approximately 5,000 acres in the northwest corner of the study area. Although burros are more concentrated in the north half, they occur throughout the WSA and, while the horse population is relatively stable, burro numbers are estimated to be growing by 23% annually. The burro population within the WSA and the area immediately north of it are estimated at between 100 to 150 head, but could range as high as 300 to 400 head; there has been no recent, comprehensive census. In contrast, the estimated burro carrying capacity for the entire California side of the Colorado River between Blythe and Yuma is only 190 head.

Several uncommon plant and animal species are either known to occur within the WSA, or possibly occur here because of their known presence nearby. Animal species include the desert tortoise, the spotted bat, and possibly the Yuma puma, all candidates for listing by the U.S. Fish & Wildlife Service (USF&WS) as a threatened or endangered species. No sensitive plants have been confirmed with the WSA, but the following may occur: Ditaxis californica, a BLM sensitive species and candidate for listing by USF&WS; and Ditaxis adenophora and Koeberlina spinosa, listed by the California Native Plant Society as rare in California but more common elsewhere.

Little Picacho Peak in the northeastern corner of the WSA and the ridge of the Chocolate Mountains in the southwestern section are currently used as ritually associated collection areas by the Quechan, Cocopa, and occasionally the Mohave. This area is of mythological significance to the elders of several Native American groups.

B. Diversity in the National Wilderness Preservation System

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 39,547 acres of the American Desert/Palo verde-cactus shrub (Cercidium-Opuntia) ecosystem. It is ecologically very similar to Indian Pass WSA 355 and Picacho Peak WSA 355A, which have been recommended for wilderness designation. The three WSAs are only six miles apart.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas		Other BLM Studies	
	areas	acres	areas	acres
	NATIONWIDE			
American Desert/Creosote Bush-Bur Sage	3	126,033	48	1,532,518
	CALIFORNIA			
American Desert/Creosote Bush-Bur Sage	2	26,472	20	938,057

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of five major population centers. Table 3 summarizes the number and acreage of wilderness areas and other BLM study areas within a five-hour drive of these population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS areas areas	NWPS areas acres	Other BLM Studies areas	Other BLM Studies acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Tucson	41	2,547,144	78	2,263,137

3. Balancing the geographic distribution of wilderness areas: From Little Picacho Peak WSA the closest designated area is Joshua Tree Wilderness at Joshua Tree National Monument, approximately 85 air miles northwest. In addition, six other BLM study areas recommended for wilderness designation are within 50 air miles, three in the California Desert District and three in Arizona's Yuma District.

C. Manageability

The Little Picacho Peak WSA is manageable as wilderness. However, several wilderness management issues must be addressed.

The WSA contains 618 unpatented mining claims. Since development of valid claims could proceed subject to not causing unnecessary and undue degradation, as defined in BLM's Wilderness Management Policy, it is likely that existing wilderness values would be adversely affected. The only way to assure maintenance of existing wilderness values would be to purchase the valid mineral rights, an option that could prove expensive.

The WSA would also be difficult to manage as wilderness because of its popularity for OHV touring and other vehicle based recreation such as rockhounding and hunting. The WSA has a long history of motorized use and is currently managed as a Limited Use Area, where vehicles are allowed only on approved routes. Washes wide enough for the passage of vehicles without damage to vegetation are presently considered approved vehicle routes, and are frequently used for that purpose. Because of the extensive system of vehicle ways, if the area were to be designated wilderness an intensive enforcement program would be required to control vehicular trespass.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The Little Picacho Peak WSA is in the BLM Picacho Geology- Energy-Minerals (G-E-M) Resource Area (GRA). The southwestern area of the WSA was cited in the GRA as having a high potential for the occurrence of rip-rap and sand and gravel. That portion of the WSA has many rock quarries formerly used in the Colorado River project by the Bureau of Reclamation, an ongoing project since the early 1900s. The southwest portion of the WSA was classified prospectively valuable for oil and gas by the U.S. Geological Survey (USGS) in 1978. At the time of the recommendation process, it was known that there had been production of gold, silver, and lead from mines in the northern section of the WSA. In the northwest and southern portions of the WSA copper had been mined. Copper minerals occur in altered diorite intrusives near the metamorphic rocks of the McCory Mountains formation in Copper Basin and south of Senator Wash. As of December 1979, there were over 100 unpatented mining claims in the WSA.

   In 1980 BLM assigned a high potential for the occurrence of gold, copper, lead, silver, and tungsten to extensive portions of the WSA. A moderate potential for the occurrence of gold was assigned to the north portion and central area surrounding the Hess mine. Map 2 shows these areas classified for moderate and high mineral occurrence potential. These assessments of potential were based on past production and current interest.

   California Division of Mines and Geology (CDMG) County Report 7 cites past production from within this WSA. Gold mining began in the northwestern portion of the WSA in 1893, in a contact zone of silicious schist. A mine in this area of the WSA produced 25 tons of ore grading 90 ounces of gold per ton in the early 1900s, and an undetermined amount of tungsten in 1953. Other mines in the area produced silver, lead, and gold, although production figures were not available. In the central part of the WSA, eight mining operations produced gold. Five mines in the southern part of the WSA produced placer gold from 1880 to 1887.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Recommendation: No USGS or U.S. Bureau of Mines mineral surveys were conducted in the WSA since it is recommended nonsuitable. Those areas classified by USGS in 1978 as potentially valuable for oil and gas are considered under the BLM classification system as having a low potential for occurrence.

Recent geologic exploration and analysis is summarized in a 1985 administrative report by Sean Hagerty, BLM geologist. The geologic environment immediately outside of the WSA has produced over $3 million worth of minerals. The metamorphic rocks mined continue through the WSA, but a thin veneer of fault thrusted igneous rocks cover these mineralized structures. Outcrops of these mineralized metamorphic rocks occur within the WSA, indicating a high potential for the occurrence of this type of metallic mineralization. In 1987, five different companies submitted plans of operation with the BLM for exploration drilling within the WSA. The results of this drilling have not been released as the companies consider this information proprietary. However, personal communications by the BLM with the companies tend to support the 1980 GRA classification for the WSA.

Unpatented lode mining claims are concentrated in the north, west, and south-central portions of the WSA. Unpatented placer mining claims are concentrated in the south-southeastern and northwestern portions of the WSA. According to BLM records dated January 1988, there were 618 unpatented mining claims within the study area, as summarized below.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	N/A	609	609	N/A	12,180	12,180
Placer	N/A	9	9	N/A	360	360
Mill Site	N/A	0	0	N/A	0	0
Total	N/A	618	618	N/A	12,540	12,540

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Over the long term, wilderness values will suffer severe adverse impacts, primarily from locatable and saleable mineral exploration and development, and to a lesser extent from OHV recreation.

2. Impact on Native American Values: Native American access to traditional religious sites will be retained. Sacred features will be subject to protection under the American Indian Religious Freedom Act. Any changes in physical appearance or use of sacred sites will be made only in consultation with the appropriate Native American group.

3. Impact on Bighorn Sheep Herd and Its Habitat: Future planned actions will be subject to environmental analysis to identify any potential impacts to bighorn sheep, allowing development and implementation of appropriate mitigation measures.

4. Impact on Motorized Recreation Opportunities: Motorized recreation can continue on approved routes. Present opportunities for OHV travel between the WSA and Picacho State Recreation Area will continue to be available. BLM may consider reopening routes within the WSA that have been closed to protect wilderness values.

5. Impact on Imperial National Wildlife Refuge and Picacho State Recreation Area: Areas of high potential for gold, silver, and lead mineralization exist along the five miles of boundary the WSA shares with the wildlife refuge, and the three miles of shared boundary with the State recreation area. It is possible that a mine could be developed on WSA lands adjacent to the refuge or the recreation area in the future. If such a proposal is received, BLM will work closely with personnel of the affected agency during the environmental analysis process, to identify and mitigate potential impacts to areas under their administration.

6. Impact on Locatable Mineral Exploration and Development: Further exploration, as well as development of the 618 existing claims, can proceed subject to existing regulations and any constraints stated in the CDCA Plan.

7. Impact on Utilization of Saleable Minerals: BLM can consider requests from the Bureau of Reclamation, as well as other entities, for use of sand, gravel, and rip-rap rock resources within the study area.

8. Impact on Management of Wild Horses and Burros: Utilization of mechanized equipment will still be possible to control and manage populations.

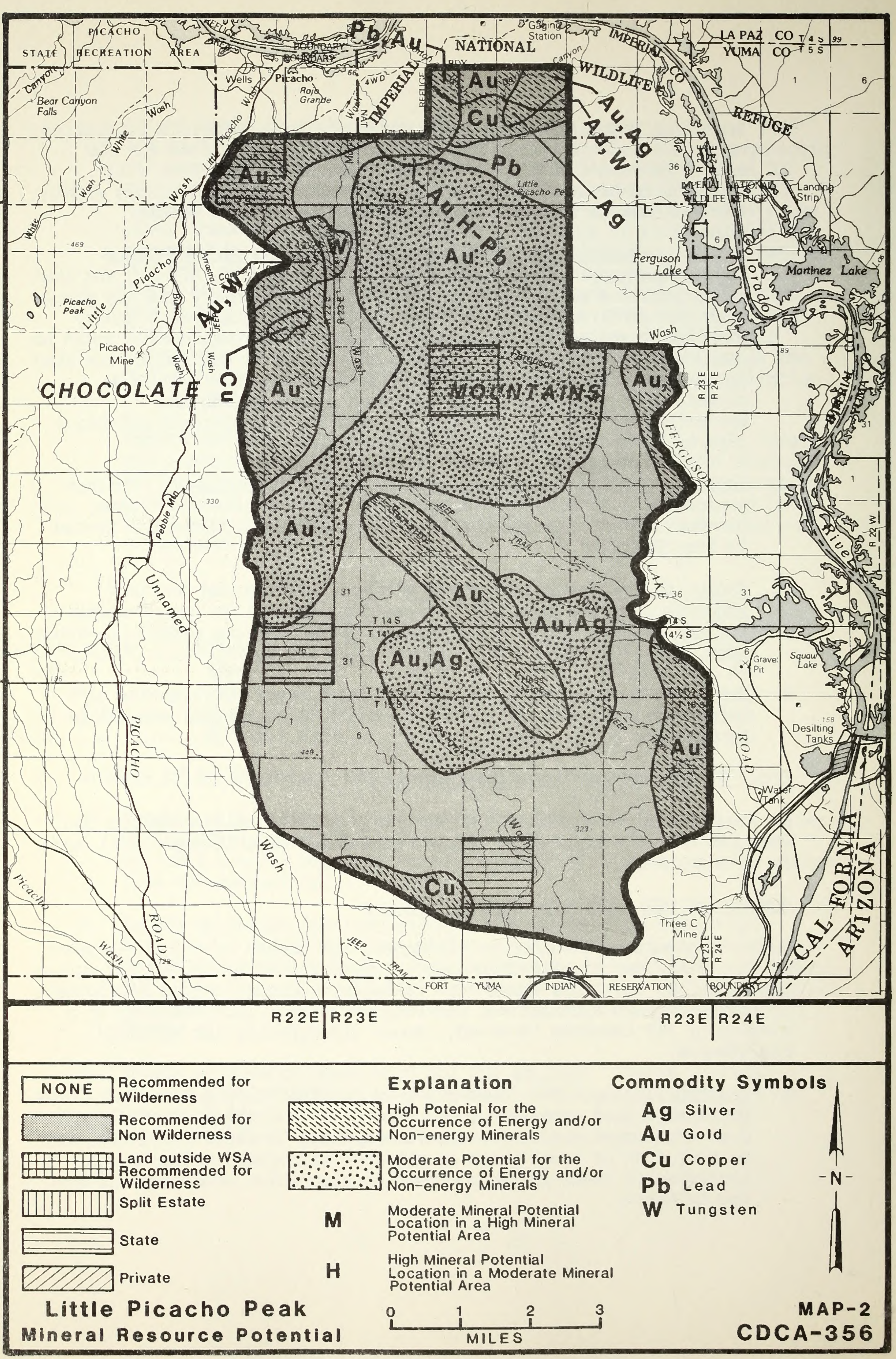
F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Known inaccuracies are noted in parentheses.

1. Inventory Phase: Many comments were received that pointed out areas where motorized vehicle use, rockhounding, and mining took place. Some additional roads were also identified. A field evaluation led to exclusion of areas which do not meet wilderness criteria and inclusion of areas in the southern portion which were found to meet the criteria.



PICACHO STATE RECREATION AREA
IMPERIAL NATIONAL WILDLIFE REFUGE
LA PAZ CO
YUMA CO
T 4 S
T 5 S
Gaging Station
Picacho
Rojo Grande
Wells
Bear Canyon Falls
White Wash
Little Picacho Wash
Little Picacho Peak
Picacho Peak
Picacho Mine
CHOCOLATE MOUNTAINS
Ferguson Lake
Martinez Lake
Landing Strip
Colorado River
FERGUSON LAKE ROAD
Unnamed Wash
Pebble Mtn
PICACHO ROAD
Picacho Wash
Gravel Pit
Squaw Lake
Desilting Tanks
Water Tank
Three C Mine
JEEP TRAIL
FORT YUMA INDIAN RESERVATION BOUNDARY
CALIFORNIA
ARIZONA
T13S
T14S
T14S
T15S
T 14½ S
R22E
R23E
R23E
R24E
R 22 W
Pb, Au
Au
Cu
Au, Ag
Au, W
Pb
Ag
Au, H-Pb
Au
W
Au, W
Cu
Au
Au
Au
Au
Au, Ag
Au, Ag
Au
Cu
NONE
Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M
Moderate Mineral Potential Location in a High Mineral Potential Area
H
High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
Ag Silver
Au Gold
Cu Copper
Pb Lead
W Tungsten
N
0
1
2
3
MILES

Little Picacho Peak
Mineral Resource Potential

MAP-2
CDCA-356

2. Study Phase: Fifty-four letters were received on this WSA. Thirty-eight were opposed to further consideration of this WSA for wilderness designation because of a concern about access for recreation and other multiple use activities. Several respondents stated that the area is a popular family recreation location; activities include sightseeing, camping, horseback riding, hiking, nature study, rockhounding, and four-wheel driving. Access by four-wheel drive vehicles was said to be necessary in order to reach recreation sites. Gem and mineral associations in Imperial County, Yuma, and San Diego areas, as well as many retired people were particularly eager to maintain access for their hobby of rock collecting. Miners and prospectors also wanted to keep the area open to vehicles. Off-highway vehicle recreationists stated that the area is excellent for their hobby, because of the varied terrain and the many established jeep trails and mining roads. Hunting is another recreation activity which the Imperial County Parks and Recreation Department listed as being in need of motorized vehicle access.

Several respondents listed factors which they believed make this area unsuitable for wilderness. These included mines, numerous roads and trails, and visual detractions such as the All American Canal, utility lines, and developments. A one-mile buffer area was suggested for the southern portion of the WSA to screen out the man-made intrusions. The potential for oil, gas, and geothermal resources was noted by several petroleum companies; development of this resource would not be possible under wilderness classification. The San Diego Gas and Electric Company and the County of Imperial wanted exclusion of a portion of the WSA on the eastern border to allow planned transmission lines to pass through the area. (No established or planned utility corridors identified in either the CDCA Plan or the 1980 Western Regional Corridor Study pass through, or along the borders of, the Little Picacho Peak WSA). The Bureau of Reclamation stated the need for rip-rap sites for Colorado River Project work and requested that the boundary of the WSA should be at least 2,000 feet from the river. (The WSA boundary is over one mile from the river at its closest location). A miner claimed that the area contains gold and copper and should be open for exploration and development.

Wilderness designation for this WSA was requested by 16 respondents. They noted its high scenic and geologic values and its importance as one of the few river related WSAs in the California Desert. An impressive list of wildlife which can be found in this area, particularly in the washes, includes the Yuma king snake, Couch's spadefoot toad, the Rocky Mountain toad, the Great Plains toad, and the Colorado River toad. A diverse representation of interesting Colorado Desert flora is also present. Ancient archeological sites were said to be present and in need of protection. (The WSA has only one recorded archeological site). Three natural watering tanks are also found here for use by desert bighorn and other wildlife. (BLM knows of no wildlife water sources within this WSA). Wildlife values are high, with Colorado River species living in the wash system of the area. Three water holes for wildlife are in the area. Some respondents recommended accommodation for vehicle access in the south and east portion of the WSA, while preserving the remainder for wilderness related recreational opportunities such as nature study, photography, rock climbing, hiking, and sightseeing. The damage caused by vehicles to vegetation, wildlife, and soils was discussed in some comments.

Three comments were received in response to the Public Input Workbook of 3-15-79. One was from the County of Imperial; it opposed wilderness because of the presence of a solid waste site and a gravel site in the area (the County waste disposal site is outside the WSA) and a transmission line which is planned to pass through the area. A second letter mentioned again the long time use of the area for rockhounding. The last respondent favored wilderness, saying that the remnants of human activities will disappear with time, and that these imprints are not a sufficient reason for designating the area nonsuitable.

3. Draft Plan Alternatives: There were few comments specific to this WSA in response to the Draft Plan Alternatives. However, this was one of many WSAs opposed by the National Outdoor Coalition (NOC), a coalition of mining, rockhounding, and off-highway vehicle groups. This organization requested a moderate intensity multiple use designation for the area, a position which was not in agreement with any of the plan alternatives. Many club members sent in letters and coupons supporting this position. Conservation oriented individuals and organizations also wrote many letters favoring wilderness for this area, as recommended by both the Protection and Balanced Alternatives. Companies and agencies which responded during the earlier phase of public input on such topics as mining, transmission lines, and geothermal energy repeated the same requests in this portion of the participation process.

4. Proposed Plan: All but a few of the respondents opposed the limited intensity multiple use designation which the Proposed Plan recommended for this area. Conservation oriented individuals and organizations wanted a wilderness recommendation, while vehicle recreationists, miners, and certain agencies wanted moderate intensity multiple use.

   Wilderness proponents, which were far in the majority, noted that Little Picacho has outstanding wilderness values and was ranked by the Bureau as twelfth among the 137 WSAs. It contains a wide variety of strikingly scenic terrain, from rugged volcanic peaks to sheer canyons and lush smoke tree washes. It offers outstanding opportunities for wilderness recreation and supports a bighorn sheep herd. They also said that the Bureau's reasons for not recommending this exceptional area as suitable for wilderness were insufficient, since human impacts had already been mostly excluded from the WSA.

A variety of groups continued to oppose a limited use designation for this area. These included recreationists who need vehicles to reach their favorite recreation spots, off-highway vehicle enthusiasts, miners, and the County of Imperial, which stated that a medium use designation would be more consistent with their general plan designation of recreation for this area.

North Algodones Dunes

CDCA 360

NORTH ALGODONES DUNES WILDERNESS STUDY AREA (WSA)

(CDCA-360)

1. THE STUDY AREA --- 27,767 acres

The North Algodones Dunes WSA is located in Imperial County, in the southern portion of the California Desert Conservation Area (CDCA). The nearest cities are Brawley, 20 miles west; Blythe, 60 miles northeast; and Yuma, Arizona, 45 miles southeast. The study area contains 26,656 acres of public land under the jurisdiction of the Bureau of Land Management (BLM), 593 acres of State land, and private and Imperial County ownership totalling 518 acres (see Map 1 and Table 1).

The west WSA boundary follows the Coachella Canal. State Highway 78 forms the southern boundary of the WSA, while Imperial County's Niland-Glamis Road forms the eastern boundary. The north WSA boundary cuts through the southern portion of the Mammoth Wash Off-Highway Vehicle (OHV) Area, and is not aligned with any physical or legal feature.

The WSA encompasses approximately 20% of the Algodones Sand Dunes system, also known as the Imperial Sand Dunes or Imperial Sand Hills. This dune system covers approximately 1,000 square miles and is one of the largest dune complexes in North America. Averaging five miles wide, the dunes extend for more than 40 miles along the eastern edge of the Imperial Valley agricultural region, continuing across the international border into Mexico. The WSA is a seven by five mile segment in the north central portion of the dune system. The remaining U.S. portions of the dunes north and south of the WSA are open to off-highway vehicle recreation, and comprise the most intensively used recreation lands in the California Desert (BLM, California Desert District, Recreation Management Information System data base).

Several other special designations overlay the North Algodones Dunes WSA. Approximately 90% of the study area is within the Imperial Sand Hills National Natural Landmark, and the Algodones Outstanding Natural Area. A cooperative agreement signed by BLM, the Navy, and the Bureau of Reclamation and incorporated into the CDCA Plan as 1985 Amendment 1, designated approximately 65% of the WSA to provide a restricted air space for military aircraft to approach nearby practice bombing targets without interference from general aviation traffic and other incompatible uses, such as population concentrations and above-ground facilities. Under the terms of the cooperative agreement, BLM retains general surface management responsibility, but must consult with the Navy when potentially conflicting uses are proposed.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act of 1976 (FLPMA). Four alternatives were analyzed by the Draft and Final Environmental Impact Statements (EIS) for the CDCA Plan, protection, use, balanced, and no action, and a summary of the WSA's wilderness values was also included in Appendix III of the CDCA Plan.

2. RECOMMENDATION AND RATIONALE ---

26,304 acres recommended for wilderness
940 BLM acres recommended for nonwilderness

Ninety-five percent partial wilderness is the recommendation for this WSA. The 940 acres in this WSA recommended nonsuitable are released for uses other than wilderness. This recommendation is in accordance with the 1981 CDCA Plan amendment. In addition to the Federal acreage recommended for wilderness, BLM recommends that 76 acres of State land and 512 acres of private and Imperial County land be acquired through exchange or purchase and designated as wilderness. With acquisition of these inholdings, a total of 26,304 acres are recommended for wilderness. Appendix 1 lists all inholdings and provides additional information on their acquisition.

The nonsuitable recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts. The balanced alternative is the environmentally preferable alternative, as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The partial wilderness recommendation is based on the following rationale: (1) the lands proposed for wilderness possess high-quality wilderness values, while these values are lower on the areas recommended for nonwilderness, (2) the proposed wilderness will protect the habitat of unique plant and wildlife species, (3) wilderness designation of the recommended portion of the WSA will not have a major impact on other uses, and (4) the recommendation is consistent with existing management objectives for the area.

The lands recommended for wilderness designation possess an outstanding primitive character which exemplifies the qualities described in the definition of wilderness contained in Section 2(c) of the Wilderness Act. The broad system of tall dunes encompassed by the WSA is "untrammeled by man," and retains its "primeval character and influence." The dune system provides a genuine challenge for hikers and backpackers. Travel through the complex maze of steep-sided, shifting sand ridges requires both physical stamina and competent orienteering ability. Evidence of previous visitors, and indeed of one's own passage, may be obliterated in a few hours by winds. Low visitation and the screening effect of the rolling topography ensure ample opportunities for solitude. Excellent scenic quality and opportunities to view or study rare or unusual plant and animal species contribute significantly to the appeal of this unique region. No primitive routes of travel have been identified within the WSA.

Wilderness designation of the recommended portion of the WSA would protect these unique wildlife and plant species, by assuring that their habitat remains undisturbed by motor vehicles. Four wildlife species are under status review by the U.S. Fish and Wildlife Service (USF&WS) for possible listing as threatened or endangered. One of them, the Andrews dune scarab beetle, is found only in the Algodones Dunes. Three plant species are under status review by the USF&WS for possible listing as threatened or endangered, and five additional plant species are considered rare or endangered by the State of California or the California Native Plant Society.

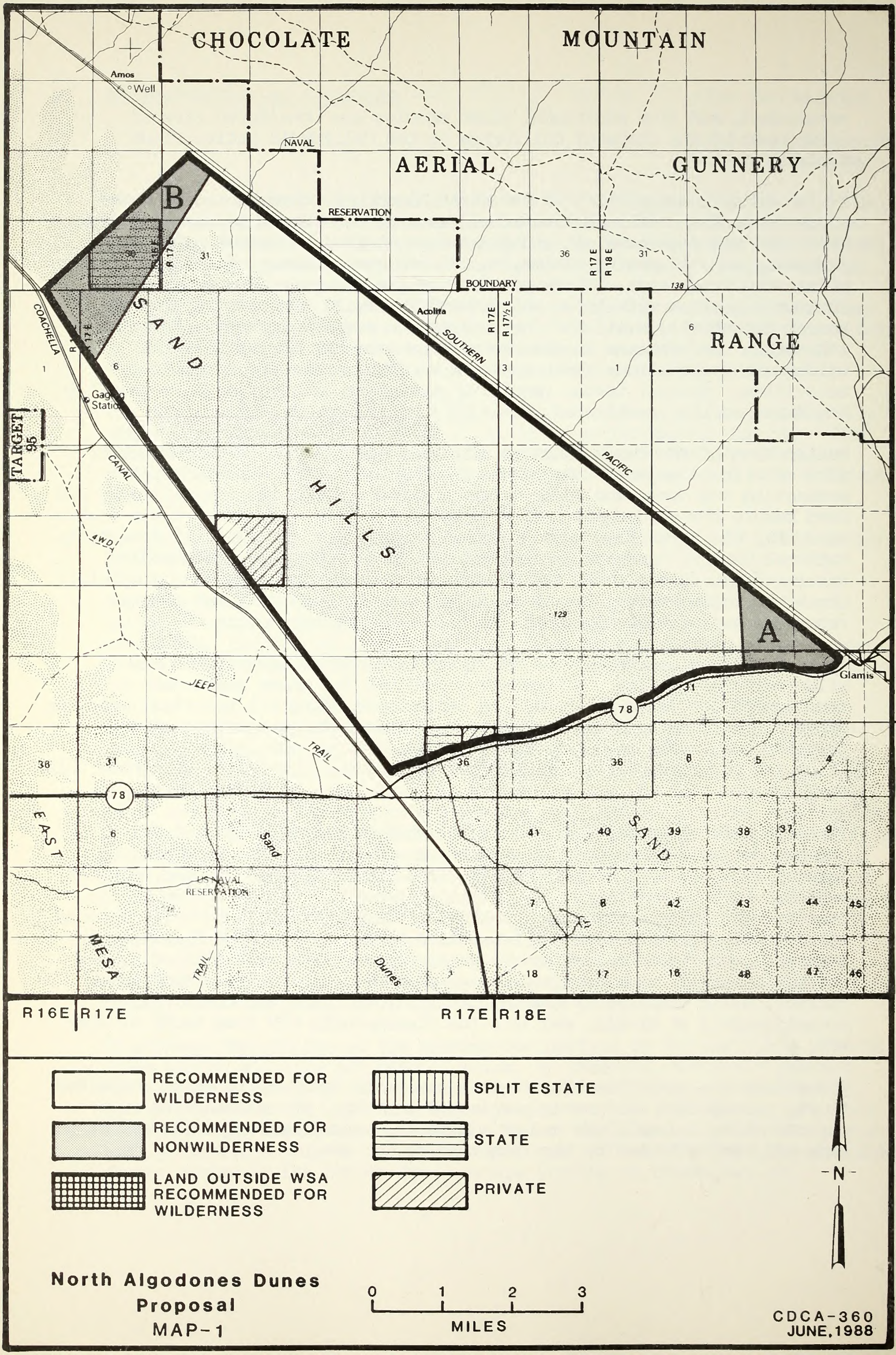
If the recommended portion of the North Algodones Dunes were designated wilderness, the conflicts with other resource uses would be minor, overall. While the WSA does have oil and gas and geothermal potential, there are presently only 20 mining claims, no oil and gas leases or geothermal leases within the study area. Other portions of the Imperial Sand Dunes and surrounding areas with known and potential mineral and energy reserves remain potentially available for exploration and development. Existing recreation use patterns in the recommended area are compatible with wilderness designation; there would be no displacement of traditional activities. Special issues requiring resolution are discussed in detail in the Manageability section of this report.

Designation of the recommended acreage as wilderness would be consistent with existing management objectives for the area. The importance of protecting the dunes and their unique flora and fauna was identified by BLM even before the wilderness review mandated by FLPMA. Prior to their status as a WSA, the North Algodones Dunes were designated the Imperial Sand Hills National Natural Landmark and established as the Algodones Outstanding Natural Area. Since 1977, the Outstanding Natural Area has been completely closed to motor vehicle travel in order to protect significant natural resources and provide opportunities for primitive recreation.

Approximately 940 acres of the WSA is recommended as nonsuitable for wilderness designation. Management guidelines for those areas not recommended for designation will be implemented using all practical means to avoid or mitigate environmental impacts. This acreage consists of two parcels, one in the southeast corner, and one along the northern edge, which for convenience will be referred to as Parcels A and B throughout this document.

These parcels are outside of the established Outstanding Natural Area. If the boundaries of the proposed wilderness and the existing Outstanding Natural Area are kept consistent, the boundary of the area closed to motor vehicles will be maintained in a location already familiar to the public, thereby minimizing enforcement problems. Parcels A and B have been managed specifically for intensive OHV recreation since 1972, and particularly on Parcel A, motorized recreation use patterns are firmly established. That parcel is heavily used as a vehicle camping and staging area, from which recreationists disperse to the adjacent private lands and commercial establishments at Glamis, and into the Glamis/Gecko OHV Area south of the WSA.

The wilderness qualities of Parcels A and B are inferior to those exhibited by the recommended wilderness portion of the WSA. Naturalness and opportunities for solitude and primitive and unconfined types of recreation have all been affected by the longstanding OHV use.


CHOCOLATE MOUNTAIN
Amos Well
NAVAL
AERIAL
GUNNERY
RESERVATION
BOUNDARY
RANGE
B
A
SAND HILLS
COACHELLA CANAL
Gaging Station
TARGET 95
4WD
JEEP TRAIL
Acolita
SOUTHERN PACIFIC
138
78
Glamis
EAST MESA
Sand Dunes
US NAVAL RESERVATION
TRAIL
SAND
T12S
T13S
T14S
R16E R17E
R17E R18E
R 17 E
R 17½ E
R 18 E
129
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES

North Algodones Dunes Proposal
MAP-1

CDCA-360
JUNE, 1988

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	26,656
Split Estate	(BLM surface only)	0
Inholdings		
State		593
Private		518
Total		27,767
Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	25,716
BLM	(outside WSA)	0
Split Estate	(within WSA)[1]	0
Split Estate	(outside WSA)[1]	0
Total BLM Land Recommended for Wilderness		25,716
Inholdings[1]		
State		76
Private		512
Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	940
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		940

---

[1] Appendix 1 is a detailed description of inholdings and split estate tracts included within the study. For purposes of this report, split estate lands are defined only as those lands with Federal surface and non Federal subsurface (minerals). Lands that have Federal minerals but non Federal surface should be classified in this report by the owner of the surface estate.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The portion of the WSA recommended for wilderness is essentially untrammeled by man. The only signs of man within this area are six wells providing water for wildlife. The wells have been concealed and are substantially unnoticeable within the area as a whole.

   Within the portion of the WSA recommended for nonwilderness in Parcel A, naturalness has been reduced by intensive OHV playriding and associated camping and staging activities. The area is laced with primitive ways. The native vegetation has been further disturbed by campers who have pruned the trees to obtain firewood and shady RV parking spaces. All of these conditions existed at the time of wilderness inventory. Parcel B has been subjected mainly to occasional OHV riding rather than intensive camping and staging activities, so impacts to naturalness there are relatively minor, and less firmly etched into the landscape.

2. Solitude: Solitude can be readily found in the portion of the WSA recommended for wilderness. The challenge of hiking into the dunes serves to limit use and enhance opportunities for solitude. The undulating transverse dunes and the thickly vegetated eastside valleys and hollows serve to shield users from one another, also enhancing the feeling of solitude.

   Sights and sounds outside the WSA reduce the perception of solitude somewhat. The sound of passing trains on the Southern Pacific Railroad immediately east of the WSA carries into the interior, and is most noticeable at night as trains pass typically every 30 minutes. These sights and sounds combine to reduce the sense of remoteness.

   Opportunities for solitude are limited by additional factors on the portion of the WSA recommended for nonwilderness. Parcel A itself is designated open to OHV travel, and is adjacent to one of the most intensively used zones in the Imperial Sand Dunes Recreation Area, including private property containing commercial establishments catering to the OHV enthusiast. Weekend crowds create high noise and dust levels, which would spill over into Parcel A even if that parcel was closed to motor vehicles. Parcel B is in a much more lightly used area, less subject to outside impacts on solitude. However, it is currently within the area designated as open to cross-country OHV travel, and solitude is occasionally interrupted by OHV traffic.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: Opportunities for primitive forms of recreation (i.e., hiking, backpacking, and nature studies) abound in the area recommended for wilderness because of the large spaces involved and the natural screening of the dunes and vegetation. The soft sand presents strenuous hiking conditions and the lack of easily identifiable topographic features presents a primitive recreational challenge found in no other southern California wilderness area.

   Within the portion of the WSA recommended for nonwilderness, Parcel A presents limited opportunities for primitive recreation, since for most individuals the quality of the experience would be reduced by the obvious human imprints in this area, and the closeness of large crowds. Parcel B provides better opportunities than Parcel A, although if designated wilderness, both of these parcels would experience conflicts between motorized and nonmotorized recreation which would reduce the quality of the primitive recreation experience. Both parcels are currently designated open to OHV recreation, and it would take a significant amount of time to educate the public if they were to be closed to vehicle entry.

4. Special Features: The North Algodones Dunes WSA constitutes an outstanding representative sample of the entire dune system. The dunes in this area reach heights of 300 feet, and include classic examples of the following different types of dunes: transverse, siefs or longitudinal dunes, parabolic, whaleback, barchan, and sand sheets. The Algodones Dunes System is the only set of dunes in California exhibiting extensive whaleback dune development. This dune type requires unlimited sand and high velocity winds. Whaleback dunes cover approximately 20% of the WSA.

   The WSA can be divided into two distinct zones. On the west side are the primary dunes, the largest, tallest, transverse dunes, composed of relatively coarse sand. On the east side are the secondary dunes, smaller and composed of generally finer sands carried further east in the prevailing winds. The secondary dunes are interrupted in places by basins or flats which support stands of trees, primarily mesquite, smoke tree, ironwood, palo verde, and desert willow. The difference in vegetation between the west and east sides of the dunes is due principally to the amount of water available, which is largely attributable to the topography of the surrounding lands. Intermittent streams draining the nearby Chocolate Mountains flow westward to the eastern edge of the dunes, which act like a dam to hold the water. Ponds form in the eastside basins during the springtime of wet years, supporting a flurry of life.

Although the high primary dunes covering the western two-thirds of the WSA are often viewed as being lifeless, a number of specialized plants and animals have adapted to this unique environment, including three plants under status review by the U.S. Fish and Wildlife Service (US F&WS) for possible designation as threatened or endangered. These species are Piersons locoweed (*Astragalus magdelenae* var. *Piersonii*), silver-leafed dune sunflower (*Helianthus niveus* ssp. *tepharodes*), and giant Spanish needle (*Palafoxia arida* var. *gigantea*). Pierson's locoweed and silver-leafed dune sunflower are listed as endangered by the State of California and as rare and endangered by the California Native Plant Society (CNPS). Giant Spanish needle is listed as rare by CNPS.

In addition to the three plant species under review by US F&WS, five additional species are listed as rare or endangered by either the State of California or CNPS. These are sand food (*Ammobroma sonorae*), the Borrego milkvetch (*Astragalus lentiginosus* var. *borreganus*), ribbed cryptantha (*Cryptantha costata*), Coulter's lyrepod (*Lyrocarpa coulteri* var. *palmeri*), and Wiggins croton (*Croton wigginsii*). Sand food and Wiggins croton were reviewed by US F&WS, which found their status did not warrant listing as threatened or endangered. While all eight of the sensitive species mentioned above are found in few places other than sand dunes, they are common and doing well within the Algodones Dunes.

There are three wildlife species of special significance that inhabit the primary dunes. The flat-tailed horned lizard (*Phrynosoma mcallii*) is under status review by US F&WS. Although the lizard occurs within the area, its numbers do not appear to be high. It is found mainly in the creosote bush scrub habitat type on the margins of the dunes, and is not found in the dunes proper. The desert tortoise (*Gopherus agassizi*) has been recorded in the northern reaches of WSA 360, but it appears that this area is on the margin of desert tortoise range and that population densities are extremely low. The tortoise is under status review by the U.S. Fish and Wildlife Service for possible listing as a threatened or endangered species. The Colorado desert fringe-toed lizard is under status review by US F&WS. It occurs in areas of loose, windblown sand throughout the study area.

In the eastern third of the WSA, the fine sands of the secondary dunes provide habitat for the Andrews dune scarab beetle (*Pseudocotalpa andrewsi*), a species unique to the Algodones Dunes. The beetle is a candidate for US F&WS listing as a threatened species. In addition, the species mentioned above under the discussion of the primary dunes either actually or potentially also occur in the secondary dunes. The Colorado desert fringe-toed lizard occurs throughout the secondary dunes. In addition, desert tortoise and flat-tailed horned lizard may occur on the eastern margins of the secondary dunes. Mule deer from the Chocolate Mountain population frequent the tree lined pockets in the secondary dune area, especially after spring or late summer rains have formed ponds and increased available forage.

B. Diversity in the National Wilderness Preservation System (NWPS)

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 26,656 acres of the AMerican Desert/Saltbush-Greasewood ecosystem. The only dune system of a size and complexity comparable to the Algodones Dunes currently protected within the National Wilderness Preservation System is located at Great Sand Dunes National Monument, Colorado. The Great Sand Dunes were formed by sand-laden winds blowing against the barrier of the Sangre de Cristo Mountains, which slowed the winds, causing them to drop their sandy burden. By contrast, the Algodones Dunes have developed in flat, open country. This is due largely to the phenomenon of seasonally opposing winds. Designation of the North Algodones Dunes WSA would thus add an unrepresented ecosystem and a dune system to the NWPS which is unique with respect to both its mode of origin and the outstanding variety of dune structures present.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS areas		Other BLM Studies	
	areas	acres	areas	acres
	NATIONWIDE			
American Desert/Saltbush-Greasewood	0	0	7	223,053
	CALIFORNIA			
American Desert/Saltbush-Greasewood	0	0	7	223,053

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: This WSA is within a five-hour drive of six major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a five-hour drive of the population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS areas areas	NWPS areas acres	Other BLM Studies areas	Other BLM Studies acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Tucson	41	2,547,144	78	2,263,137

3. Balancing the geographic distribution of wilderness areas: No other portions of the Algodones Sand Dunes system are now designated or recommended for wilderness designation by BLM. The closest designated wilderness areas are the Anza-Borrego Desert State Park Wilderness, approximately 55 air miles west, and Joshua Tree Wilderness at Joshua Tree National Monument, approximately 60 air miles northwest. There are nine BLM study areas recommended for wilderness designation within 50 air miles of the North Algodones Dunes. Six are within the California Desert District and three are within Arizona's Yuma District.

C. Manageability

The entire WSA is manageable as wilderness. However, there is a significant difference in ease of manageability between the portion recommended for wilderness and the portion recommended for nonwilderness.

The recommended wilderness portion has been closed to motor vehicles since 1977. Off-highway vehicle recreationists are already familiar with these posted boundaries. Manageability is further enhanced because the west, south, and east boundaries are clearly defined by physical features: the Coachella Canal, Highway 78, and the Niland-Glamis Road.

In contrast, the portion of the WSA recommended for nonwilderness would be difficult to manage as wilderness because motorized recreation use patterns are firmly established. Parcel A is not only outside the existing closed area, but has been and continues to be heavily used for intensive OHV recreation. While Parcel B is also designated open to OHV use, it is not heavily used. However, the northern boundary of Parcel B cuts across the dune system and is not defined by any readily visible landmark. The only way to delineate the boundary would be by a line of closely-spaced signs. The currently posted vehicle closure would have to be moved north one-half to one mile to incorporate Parcel B within the proposed wilderness. After 10 years of enforcement, the OHV public is familiar with the existing closed area boundary relative to both Parcels A and B.

On the portion of the WSA recommended for wilderness, manageability would be improved if three situations were resolved that either potentially or actually conflict with maintaining the area's high quality wilderness values. The first involves maintenance of Highway 78 by the California Department of Transportation (CalTrans). The second involves the non-Federal inholdings within the WSA over which BLM has no control, and the third is the type of wildlife watering facilities that are compatible with wilderness management.

There are three blocks of non-Federal inholdings within the WSA. If the non-Federal parcels were acquired, the west and south wilderness boundaries would be uniformly aligned with the Coachella Canal and Highway 78 and the north boundary would become a straight line, thereby improving visitor identification of the boundary and enforcement effectiveness. Acquisition would also assure that activities which are incompatible with wilderness are not allowed to occur.

As mentioned in Section 3 of this report, the WSA contains six wells that provide water for wildlife. The structures were necessary in order to ensure the continued welfare of species inhabiting the WSA which had been adversely affected by human activities. For nearly 40 years, mule deer and other wildlife species utilized the water and streamside vegetation found along the earthen banks of the Coachella Canal at the western edge of the WSA. In 1980, the canal was lined with concrete, killing the streamside vegetation and creating a deathtrap for animals attempting to reach the water. In that year, 29 deer drowned after being trapped in the canal and numerous others were rescued by State Fish and Game personnel. In order to disperse the deer away from the canal hazard and toward areas of natural habitat existing prior to original construction of the canal, the BLM, the Bureau of Reclamation, the California Department of Fish and Game, and sportsman's organizations devised a plan to develop wildlife watering devices at 19 locations in the region, including the six within the WSA. BLM determined that these wildlife facilities were consistent with both the Bureau's Interim Management Policy for lands under wilderness review as well as the Wilderness Management Policy. The facilities will be maintained without motorized access.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The southern portion of the North Algodones Dunes WSA is within the Glamis Known Geothermal Resource Area (KGRA) designated by the U.S. Geological Survey (USGS) in 1970. USGS also classified the area as prospectively valuable for oil and gas in 1978.

   Prior to publication of the CDCA Plan, BLM prepared a Geology-Energy-Mineral (G-E-M) Report for the East Mesa North G-E-M Resource Area (GRA), of which the WSA is a part. However, the CDCA Plan did not fully analyze and interpret the East Mesa North GRA Report as it specifically relates to this WSA. The GRA Report shows the WSA to have high potential for geothermal resources. An approximate one-mile wide strip along the WSA's east boundary and a small area along the southwest border are classified as having high potential for the occurrence of glass sand resources (See Map 2). No other high or moderate potential energy or mineral occurrences are identified in the GRA Report. (The East Mesa North GRA Report is a BLM administrative report available in the California Desert District G-E-M resource files).

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Recommendation: The mineral potential of the WSA was inventoried by the USGS and the U.S. Bureau of Mines (BOM), who published their findings in 1984 (Open File Report OFR-84-639). BOM released the report of their activity in 1983 (MLA-43-83). This report indicates that the WSA has moderate to high potential for the occurrence of gas and associated hydrocarbon resources, and moderate potential for the occurrence of geothermal resources and associated chemical salts and minerals.

   The discovery of natural gas and associated hydrocarbons by PEMEX (the national oil company of Mexico) in a well six miles south of the U.S./Mexican border in marine Pliocene sands of the Imperial Formation sparked new oil and gas leasing interest on Federal land in the vicinity of the WSA. It is suspected that the hydrocarbon bearing Imperial sands extend northward into the Salton Sea area, and possibly into the WSA. BLM maintains (December 1987) that the area is prospectively valuable for oil and gas resources.

   Geothermal exploration projects completed in 1987 by Magma Geothermal and Ormat Geothermal companies indicated that the productive East Mesa KGRA, two miles west of the WSA, extends further east than previously thought. This extension trends into the southern one-fourth of the WSA. The determination by the two companies indicates that the geothermal resources of the southern portion of the WSA can be utilized for power generation and direct low temperature uses. In 1987, three geothermal power plants were under construction approximately ten miles southwest of the WSA. For geothermal resources, BLM maintains a prospectively valuable classification for the WSA.

In 1987 BLM received several public inquiries regarding processing the sands of the Imperial dunes near State Highway 78 for recovery of heavy minerals and glass sand. An application to purchase sand for glass manufacturing under the Material Sales Act was made for an area immediately north of the WSA in 1986. The sale was not consummated by BLM.

There has been no production of any mineral or energy resources from the WSA. According to BLM records dated December 1987, the WSA contained 20 unpatented lode mining claims encumbering 400 acres (Table 4). There were no geothermal leases or oil and gas leases. BLM has maintained a moratorium on new leasing in WSAs since 1983 at the direction of Congress. However, two previous attempts to competitively lease the Glamis Known Geothermal Resource Area failed to produce a single bid.

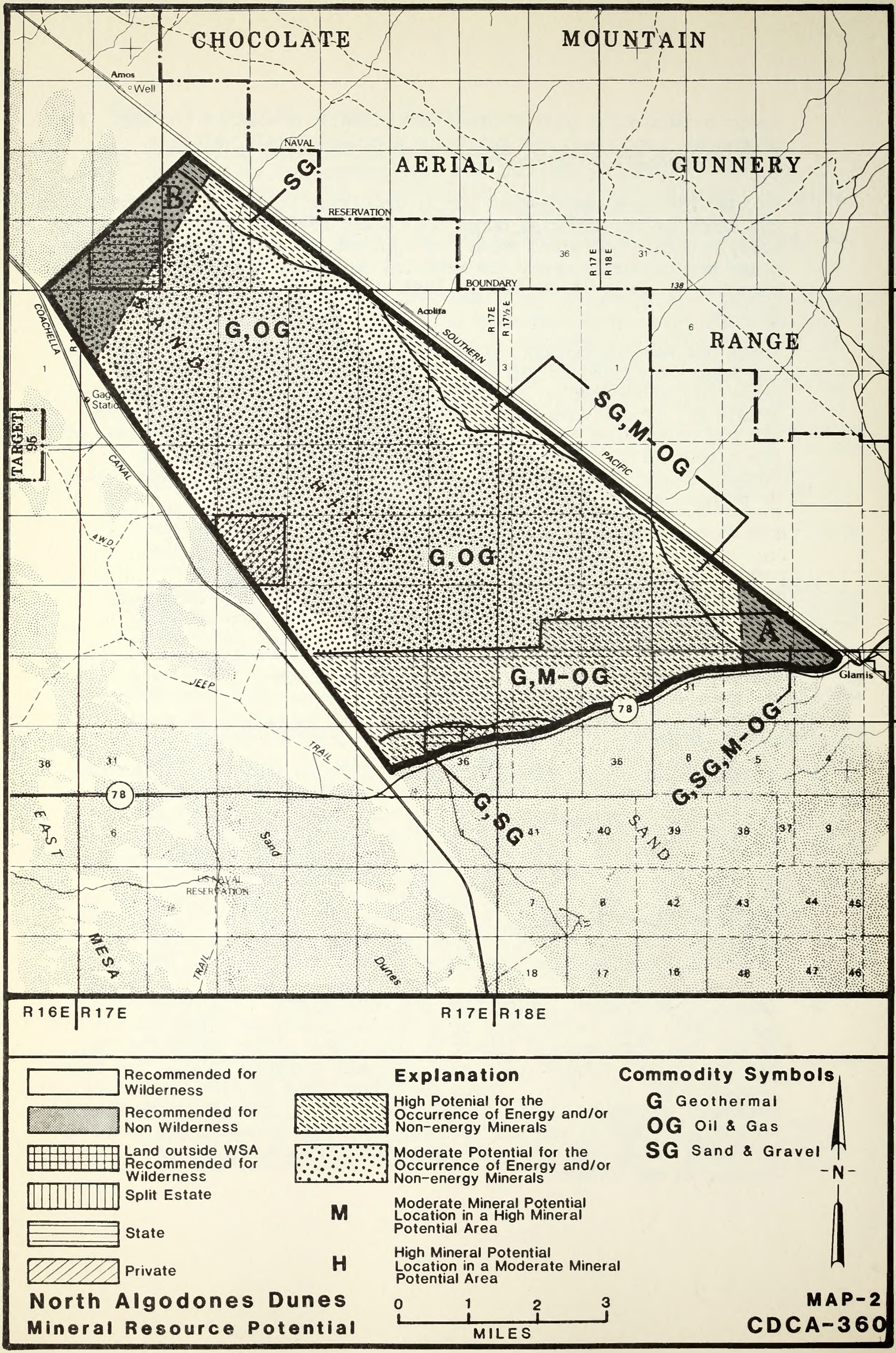
Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	20	0	20	400	0	400
Placer	0	0	0	0	0	0
Mill Sites	0	0	0	0	0	0
Total	20	0	20	400	0	400

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: There will be no impact to wilderness values on the 95% of the WSA designated wilderness; existing high values will be maintained. The Southern Pacific Railroad will continue to negatively affect solitude, as they do at present. In the ten percent of the WSA to remain nonwilderness, naturalness, opportunities for solitude, and opportunities for primitive and unconfined recreation will gradually decline over the long term as a result of projected gradually increasing OHV use and the cumulative effect of this use. This adverse impact is considered minor, since values will not decline significantly from their present levels.

2. Impact on Geothermal Exploration and Development: The proposed action will make development of potential resources unfeasible on 95% of the WSA. The adverse impact is considered minor, since the WSA has had no past production, previous lease attempts failed, and there currently are no leases. There are other areas of high geothermal potential elsewhere in the Imperial Sand Dunes, outside of this WSA. On the remainder of the WSA not designated wilderness there would be no impact, since the area will be potentially available for geothermal development.



North Algodones Dunes

Mineral Resource Potential

MAP-2

CDCA-360

CHOCOLATE MOUNTAIN
NAVAL AERIAL GUNNERY RANGE
RESERVATION
BOUNDARY
Amos
Well
B
A
SG
SG, M-OG
G, OG
G, M-OG
G, SG
G, SG, M-OG
SAND HILLS
COACHELLA CANAL
SOUTHERN PACIFIC
Acolita
Gasoline Station
Glamis
TARGET 96
4WD
JEEP TRAIL
78
138
EAST MESA
Sand Dunes
SAND
US NAVAL RESERVATION
TRAIL
T12S
T13S
T14S
R16E
R17E
R17½E
R18E
Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potential for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
G Geothermal
OG Oil & Gas
SG Sand & Gravel
N
0 1 2 3
MILES

3. Impact on Oil and Gas Exploration and Development: There will be a moderate adverse impact to oil and gas exploration on 95% of the WSA, since most of the area considered to have moderate to high oil and gas potential is within the recommended wilderness boundaries. There will be no impact to oil and gas exploration and development on the ten percent of the WSA not designated wilderness, since the area will be potentially available for oil and gas extraction.

4. Impact on Glass Sand Resource Development: Under the proposed action, most of the area within the WSA considered to have high potential for glass sand resources will become wilderness and therefore unavailable for resource extraction. The adverse impact is considered minor, since glass sand is not rare within the Imperial Sand Dunes, and resources of similar quality and accessibility exist throughout the eastern dune margin, including areas north and south of the WSA which BLM manages for high-intensity multiple use.

5. Impact on Habitat of Candidate Threatened/Endangered Plant and Animal Species: The proposed action will have a minor beneficial impact on 95% of the WSA, as a result of permanently excluding surface disturbing activities such as OHV use or energy/mineral exploration and development. There will be a negligible impact in the ten percent of the WSA to remain nonwilderness. Monitoring and patrol efforts, and mitigation measures to be stipulated as part of any authorized activities, will assure that sensitive species receive adequate protection.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA-Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Known inaccuracies are noted in parentheses.

1. Inventory Phase: A majority of the comments addressing the inventory factors agreed with the present status of the area's boundaries or felt they should be expanded. Other comments said the area had roads that had not been included or that the works of man were evident. The area was reevaluated, and changes made where appropriate.

2. Study Phase: The unique nature of the Algodones Dunes generated more comments than any other WSA in the desert, over 400 for both WSA 360 and WSA 362, with many letters referring to both areas. Many letters

came from organized groups concerned about the dunes, and the number of letters received included several copies of a single letter signed by separate individuals.

About 215 comments were received about this WSA, with a heavy majority favoring a multiple-use designation for the area. The area's highest value, according to many, is as a recreation area. For many it is the best motorized vehicle area in the desert, along with WSA 362. The values of family recreation are described in several letters: old, young, and handicapped persons can enjoy the scenic and natural values of this area only in vehicles; children learn driving skills, nature skills, and family responsibility and, besides strengthening family ties, these activities give youth the outlet for energies that may otherwise be used in ways destructive to themselves or others. Not only do these values far outweigh those of protecting unimportant species of dune insects and vegetation, the activity of vehicles has little or no effect on these species, many argue. The vitality of wildlife and vegetation is a function of moisture, not motorized vehicle use; vehicles actually aid in the transportation of seeds throughout the dunes it was claimed. Only designated rare and endangered species should be protected, not those proposed for the Federal lists, it was suggested. The presence of these species in the area has been exploited by groups biased against motorized vehicles. Hiking is too difficult in the dunes area. The area, already closed to vehicle access, should be at least partly reopened -- a previous north-south corridor should be reinstituted, several suggested. One comment said that only the middle half of the area has true wilderness qualities.

Besides the economic impacts on Imperial County, the restriction of motorized vehicle use may result in heavy use in other, more sensitive areas and overcrowding in the dunes areas. This WSA contains the Dunes KGRA (The Dunes KGRA is within WSA 362 to the south. A portion of the Glamis KGRA is within this WSA.) which may result in important energy generation and beneficial spinoff effects for Imperial County, particularly in food processing.

Sight and sound intrusions said to affect this area include: the railroad on the eastern border; military activities, including bombing noise and low-flying aircraft; traffic on State Route 78; the Coachella Canal; and the visibility of farms and other human activity in Imperial Valley. Deletion of the entire area, or boundary adjustments to the WSA, were recommended.

The unique environment of the Algodones Dunes was the strongest argument for wilderness, according to many writers. Among the many species existing here are: Eriogonum, desert sunflower, giant Spanish needle, Ammobroma sonorae, Wiggins croton, horned lizard, Colorado Desert sidewinder, banded desert gecko, scarab beetle, Ephedra trifarca, Hespericallis undulata, Oro banche cooperi, western brush lizard, desert iguana, fringe-toed lizard, Astragalus lontiginosus, Palofoxia linearis, mesquite, and palo verde. Vehicle use was said to have dramatic soil and hydrological effects which reduce the ability of these biota to survive in the delicate balance of a desert environment. This ecosystem is unique and irreplaceable, with species of (candidate) rare and endangered plants and animals. Some letters noted that primitive recreation opportunities were good, with the dunes providing solitude, scenic and stark vistas, and a variety of biota for study. Spring floral displays were said to be outstanding.

Several comments were received in response to the Public Input Workbook of 3/15/79. Some comments favored wilderness classification to protect rare/endangered species and natural values. Others opposed wilderness classification because the area borders the Chocolate Mountains Aerial Gunnery Range, and this is no place for primitive and unconfined recreation.

3. Draft Plan Alternatives: A variety of public comments were received during formal review of the draft CDCA Plan/EIS. Two indicated complete agreement with All Wilderness, while a third was in agreement with No Wilderness. It was requested that the All Wilderness recommendation include more acreage as suitable. Some noted that rare and endangered plant and animal species resided within the study area. More details were requested on what criteria were used for reducing the size of the wilderness study area. In addition, one stated that the exploration for and development of oil, gas, and geothermal resources under the No Action Alternative were the best uses of the wilderness study area.

   The U.S. Fish and Wildlife Service and the U.S. Marine Corps Yuma Air Station commented on the draft CDCA Plan/EIS. The Fish and Wildlife Service stated that the limited amount of the total dunes system recommended for wilderness made it questionable whether adequate protection would be provided for three candidate threatened plant species and three endemic beetle species. The Marine Corps warned that aircraft training flights, which cross this WSA at low levels and high speeds, must be specifically provided for.

   The National Outdoor Coalition, made up of mining, rockhounding, and OHV groups, recommended that the WSA not be designated wilderness, and that it be made available for low-intensity management. The Sierra Club and other conservation organizations favored wilderness designation. Members of these groups submitted thousands of letters and coupons supporting their respective positions.

4. Proposed Plan: Few comments were received on this WSA during review of the final CDCA Plan/EIS. The Imperial County Planning Department requested that the WSA not be designated wilderness, but be allocated for moderate intensity multiple-use management to conform to the County General Plan which designates this area for motorized recreation.

5. 1981 Plan Amendments: A 1981 CDCA Plan amendment changed the boundary of the area recommended for wilderness designation to exclude a parcel in the southeast corner of the WSA (Parcel A). This amendment recognized existing management emphasis and intensive motorized recreation uses occurring in the area. Five respondents approved the change. Three respondents opposed the amendment because they felt Highway 78 would have been a reasonable, unambiguous wilderness boundary, and that the newly proposed boundary would be ill-defined and unmanageable.

APPENDIX 1
ESTIMATED COSTS OF ACQUISITION OF NON-FEDERAL HOLDINGS WITHIN AREAS RECOMMENDED FOR DESIGNATION
NORTH ALGODONES DUNES WSA (CDCA-360)

PARCEL No.	LEGAL DESCRIPTION TWNSHP	RNG	SEC	MERIDIAN	TOTAL ACREAGE	NUMBER OF OWNERS	TYPE OF OWNERSHIP BY ESTATE SURFACE ESTATE	SUBSURFACE ESTATE	PRESENTLY PROPOSED FOR ACQUISITION	PREFERRED METHOD OF ACQUISITION	ESTIMATED COST OF ACQUISITION LAND COSTS ($1000)	PROCESSING COSTS ($1000)
1	18S.	16E.	36	SBM	40	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
2	18S.	17E.	36	SBM	80	1	PRIVATE	PRIVATE	YES	PURCHASE	8.0	2.5
3	18S.	17E.	36	SBM	160	1	STATE	STATE	YES	EXCHANGE	N/A	4.0
4	18S.	17E.	16	SBM	*(506)	3	PRIVATE	PRIVATE	YES	PURCHASE	(50.6)	(7.5)

* Indicates that exact parcel acreage is unknown. Total acreage for all parcels in a particular section are shown in ( ).

These figures were derived from Bureau Land Records and provide for more detail than GIS estimates and therefore may differ from acreage summaries in Table 1.

South Algodones Dunes

CDCA 362

SOUTH ALGODONES DUNES WILDERNESS STUDY AREA (WSA)

(CDCA-362)

1. THE STUDY AREA --- 52,359 acres

The South Algodones Dunes WSA is located in Imperial County, in the southern portion of the California Desert Conservation Area (CDCA). The nearest cities are Brawley, 24 miles west; Blythe, 70 miles northeast; and Yuma, Arizona, 22 miles east. The WSA contains 51,375 acres of public land under the jurisdiction of the Bureau of Land Management (BLM), 278 acres of State land, and private inholdings totalling 706 acres (see Table 1 and Map 1).

The WSA's east and west boundaries follow the edge of the dune system. The south boundary is an unposted line across the dunes which indicates the northern limit of substantially noticeable impacts resulting from vehicle use originating in the Buttercup Valley Off-Highway Vehicle (OHV) Area. The WSA's north boundary is the unposted south boundary of the Glamis/Gecko OHV Area. The WSA itself is open to cross-country motor vehicle use, and on the north and south borders the most intensively used OHV recreation lands in the California Desert (BLM, California Desert District, Recreation Management Information System data base). The North Algodones Dunes WSA, which is closed to vehicle use and recommended for wilderness designation, is approximately five miles north of this WSA.

The WSA encompasses approximately 50% of the Algodones Sand Dunes system, also known as the Imperial Sand Dunes or Imperial Sand Hills. This dune system covers approximately 1,000 square miles and is one of the largest dune complexes in North America. Averaging five miles wide, the dunes extend for more than 40 miles along the eastern edge of the Imperial Valley agricultural region, continuing across the international border into Mexico. The WSA is a 12 by six mile segment in the central portion of the dune system.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EISs) for the CDCA Plan: protection, use, balanced, and no action; a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

0	acres recommended for wilderness
51,375	BLM acres recommended for nonwilderness

No wilderness is the recommendation for this WSA. The entire acreage in this WSA is released for uses other than wilderness. Use will be maintained at low levels by leaving the area undeveloped, with no recreational access improvement or facility development, in accordance with the 1987 Imperial Sand Dunes Recreation Area Management Plan. The selected recommendation will offer protection for botanical and wildlife resources while still allowing traditional off-highway vehicle use and potential geothermal energy development. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The South Algodones Dunes WSA is recommended nonsuitable for wilderness designation for the following reasons: (1) the long tradition of motor vehicle use; (2) the projected continued high demand for sand dune oriented off-highway vehicle use; (3) the WSA's potential for energy and mineral development; and (4) the similarity of the area to a nearby WSA recommended for wilderness.

The lands within the WSA have been used for off-highway vehicle recreation for approximately the last 30 years, and have been managed by BLM with the specific objective of providing off-highway vehicle recreation opportunities since 1972. The entire area is currently designated "open" to off-highway vehicles, and receives an estimated 6000 recreation visitor use days annually. Almost all of this use is vehicle based, and would therefore be displaced with wilderness designation. No primitive routes of travel have been identified within the WSA.

The WSA provides important access between the intensively used Glamis/Gecko OHV Area and the Buttercup Valley OHV Area, located north and south of the WSA, respectively. The presence of these two popular OHV recreation areas immediately adjacent to the WSA, with no natural barriers or landmarks to delineate the boundary, makes the WSA effectively unmanageable as wilderness.

The WSA provides excellent opportunities for photography and nature study, but most visitors using the area for these purposes utilize an OHV for access. Hiking, backpacking, horseback riding, and other non-motorized activities occur infrequently. In comparison to the North Algodones Dunes WSA, the edge of the South Algodones Dunes WSA is, in general, much less accessible by two-wheel drive vehicle. The relative lack of access has tended to limit its use by nonmotorized recreationists.

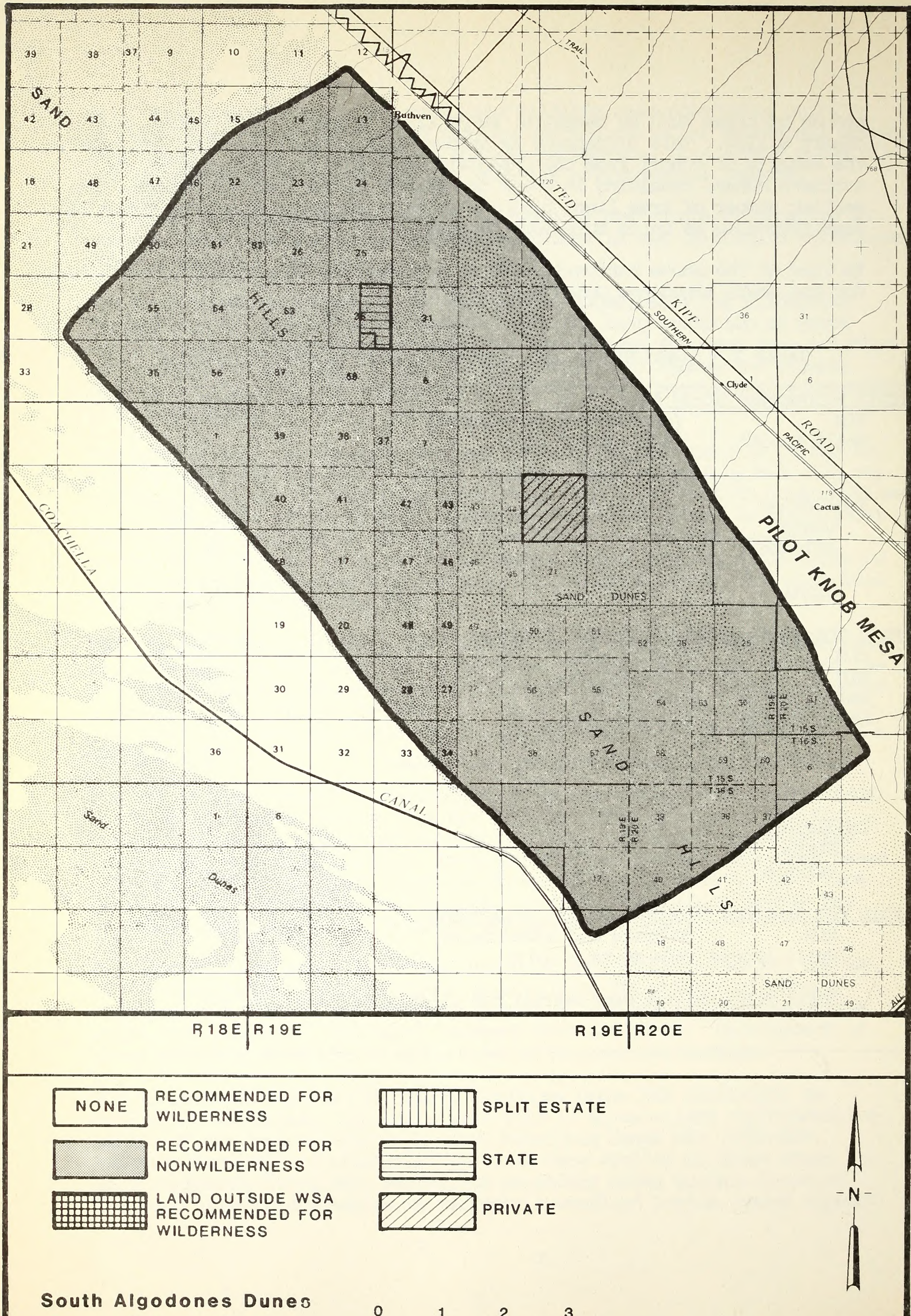
Most of the Dunes Known Geothermal Resource Area (KGRA) is within the WSA, and is considered by BLM to have high potential for geothermal energy development. The WSA may also have potential for oil and gas, locatable glass sand resources, and metal recovery from the sands. Development of these resources would be foregone under wilderness designation.

BLM is recommending that the North Algodones Dunes WSA (CDCA-360) be designated wilderness, and feels that this is an excellent representative sample of the dune system. The South Algodones Dunes WSA (CDCA-362) exhibits physical and biological features very similar to those found in North Algodones Dunes WSA, except its secondary dunes contain fewer and less well developed examples of microphyll woodland basins, which support stands of trees such as mesquite, smoke tree, ironwood, palo verde, and desert willow. This difference is because the southern dunes do not receive the benefit of runoff from the Chocolate Mountains in the manner of the northern dunes, resulting in dryer conditions in the southern basins. The smaller number of tree lined basins also make the South Algodones Dunes WSA less favorable as burro mule deer habitat.

In view of the above rationale, BLM is recommending low intensity management for the South Algodones Dunes WSA.

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	51,375
Split Estate	(BLM surface only)	0
Inholdings		
State		278
Private		706
Total		52,359
Within the Recommended Wilderness Boundary		**Acres**
BLM	(within WSA)	0
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		0
Inholdings		
State		0
Private		0
Within the Area Not Recommended for Wilderness		**Acres**
BLM	(surface and subsurface)	51,375
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		51,375


SAND HILLS
Ruthven
TRAIL
KIPE ROAD
SOUTHERN PACIFIC
Clyde
Cactus
PILOT KNOB MESA
SAND DUNES
COACHELLA CANAL
Sand Dunes
T14S
T15S
T16S
R18E
R19E
R20E
NONE
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES

South Algodones Dunes Proposal

MAP-1

CDCA-362
JUNE, 1988

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The WSA is essentially untrammeled by man, although small portions of the landscape have been modified by human activity. Along the relatively stable, vegetated eastern and western margins of the dune system are found a number of OHV trails ("sand highways") which are 20- to 50-foot wide strips void of vegetation. OHV tracks are found at times throughout the WSA, but these tracks are periodically erased by windstorms, except on the sand free floors of some interior basins. The only other signs of human activity are items of unexploded ordnance left over from the days when the dunes were used as a bombing and gunnery range (1940s through the 1960s). Although military teams have swept the area on several occasions, items of ordnance are periodically exposed by shifting sands.

2. Solitude: The undulating topography shields users from each other and provides ample opportunities for solitude. In areas of actively shifting sand which comprise the vast majority of the WSA, windstorms periodically erase all evidence of man, providing a feeling of remoteness.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: There are numerous opportunities for primitive forms of recreation (i.e., hiking, backpacking, and nature studies) because of the large spaces involved and the natural screening of the topography. However, two-wheel drive access to the edge of the WSA is severely limited. Most sections of the boundary are reachable only on foot or by an off-highway vehicle. This lack of access restricts primitive recreation opportunities somewhat.

4. Special Features: The South Algodones Dunes WSA (CDCA-362) contains special features very similar to those found in the North Algodones Dunes WSA (CDCA-360). As is the case with the North Algodones Dune WSA, this WSA contains dunes reaching heights of 300 feet, and includes classic examples of several different types of dunes, including transverse, sief, parabolic, whaleback, and barchan dunes, as well as sand sheets.

   This WSA's specialized plants and animals are also very similar to those found in the North Algodones Dunes WSA. The following plants and animals, all under status review by US F&WS, occur in both WSAs: Piersons locoweed (*Astragalus magdelenae* var.

Piersonii), silver-leafed dune sunflower (Helianthus niveus ssp. tepharodes), giant Spanish needle (Palafoxia arida var. gigantea), Andrews dune scarab beetle (Pseudocotalpa andrewsi), flat-tailed horned lizard (Phrynosoma mcallii), and Colorado desert fringe-toed lizard. The desert tortoise (Gopherus agassizi), which has been observed in WSA 360, is not known to occur in WSA 362.

In addition to the three plant species under review by US F&WS, three additional species within the WSA are listed as rare or endangered by either the State of California or CNPS. These are sand food, Borrego milkvetch, and Wiggins croton. Sand food and Wiggins croton were reviewed by US F&WS, which found their status did not warrant listing as threatened or endangered. While all six of the sensitive plant species mentioned are found in few places other than sand dunes, they are common and doing well within both of the Algodones Dunes WSAs, and are present in large numbers on those parts of the dune system outside the WSAs.

B. Diversity in the National Wilderness Preservation System

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 51,375 acres of the American Desert/Saltbush-Greasewood ecosystem. Although this WSA would add diversity in the types of ecosystems represented in the NWPS the Bureau has recommended three WSAs with similar ecosystems (Saline Valley WSA, Inyo Mountains WSA, and North Algodones Dunes WSA) as suitable for wilderness designation.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas		Other BLM Studies	
	areas	acres	areas	acres
	NATIONWIDE			
American Desert/Saltbush-Greasewood	0	0	7	198,334
	CALIFORNIA			
American Desert/Saltbush-Greasewood	0	0	7	198,334

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of six major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a five-hour drive of the population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS areas areas	 acres	Other BLM Studies areas	 acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814
Arizona				
Phoenix	40	1,758,456	118	4,449,908
Tucson	41	2,547,144	78	2,263,137

3. Balancing the geographic distribution of wilderness areas: The closest designated areas are the Anza-Borrego Desert State Wilderness, approximately 65 air miles west, and Joshua Tree Wilderness, managed by the National Park Service, approximately 70 air miles northwest. The South Algodones Dunes WSA is only five miles south of the North Algodones Dunes WSA, which BLM has recommended for wilderness designation. In addition, six other BLM study areas recommended for wilderness designation are within 50 air miles, three in the California Desert District and three in Arizona's Yuma District.

C. Manageability

The South Algodones Dunes WSA is manageable as wilderness. However, its particular location within the Imperial Sand Dunes Recreation Area and established recreation use patterns would make wilderness management highly impractical. The intensively used Glamis/Gecko and Buttercup Valley OHV Areas are immediately north and south of the WSA, respectively. Glamis/Gecko received an estimated 528,000 visitor use days in 1987, while Buttercup Valley received 250,000. The WSA itself has been used for OHV recreation for about 30 years, and contains access corridors known as sand highways by which people travel back and forth between the two OHV areas. None of the WSA boundaries are defined by any permanent landmark. The north and south boundaries cross the main dune system and are not readily definable on the ground. The east and west boundaries follow the approximate edge of the dune system, but the eastern dune margin is irregular and actively shifting. The WSA's tradition of OHV use, combined with the lack of landmarks to delineate its 40 miles of boundary, would create a need for intensive patrol and installation of physical barriers and signs requiring frequent maintenance, should the WSA be designated wilderness.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: The U.S. Geological Survey (USGS) classified a small portion of the WSA as the Dunes Known Geothermal Resource Area (KGRA) in 1970. USGS also classified the area as prospectively valuable for oil and gas in 1978.

   Prior to publication of the CDCA Plan, BLM prepared a Geology-Energy-Mineral (G-E-M) Report for the East Mesa South G-E-M Resource Area (GRA), of which the WSA is a part. However, the CDCA Plan did not fully analyze and interpret the East Mesa South GRA Report as it specifically relates to this WSA. The GRA Report shows the WSA to have high potential for geothermal resources (see Map 2). No other high or moderate potential energy or mineral occurrences are identified in the GRA Report. Oil and gas resources are classified as having a low potential for occurrence. (The East Mesa South GRA Report is a BLM administrative report available in the California Desert District G-E-M resource files).

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Recommendation: The discovery of natural gas and associated hydrocarbons by PEMEX (the national oil company of Mexico) in a well six miles south of the U.S./Mexican border in marine Pliocene sands of the Imperial Formation sparked new oil and gas leasing interest on Federal land within the WSA. It is suspected that the hydrocarbon bearing Imperial sands extend northward into the Salton Sea area, and possibly into the WSA.

   Geothermal exploration projects completed in 1987 by Magma Geothermal and Ormat Geothermal companies indicated that the productive East Mesa KGRA, two miles west of the WSA, extends further east than previously thought. This extension includes the entire South Algodones Dunes WSA. The determination by the two companies indicates that the geothermal resources of the WSA can be utilized for power generation and direct low temperature uses. In 1987, three geothermal power plants were under construction approximately two to three miles west of the WSA.

   In 1987 BLM received several public inquiries regarding processing the sands of the Imperial dunes near State Highway 78 for recovery of heavy minerals and glass sand. An application to purchase sand for glass manufacturing under the Material Sales Act was made for an area immediately north of the WSA in 1986. The sale was not consummated by BLM. In an area just outside the WSA's north boundary, sand and gravel has been excavated by the Imperial Irrigation District for maintenance of their irrigation canal network. The northeast portion of the WSA is classified by BLM as having a moderate potential for sand and gravel resources.

There has been no production of any mineral or energy resources from the WSA. Oil and gas leases covered the WSA in 1980 but all terminated without any development having taken place. In 1982, two oil and gas leases were issued for areas in the north and west portion of the WSA, but these also terminated without any development. As of December 1987, the WSA contained no geothermal leases, or oil and gas leases. A lease application was pending in December 1987 for land within the central portion of the WSA; however, BLM has maintained a moratorium on new leasing in WSAs since 1983 at the direction of Congress. Unpatented mining claims located within the WSA are summarized in the following table taken from BLM records dated December, 1987.

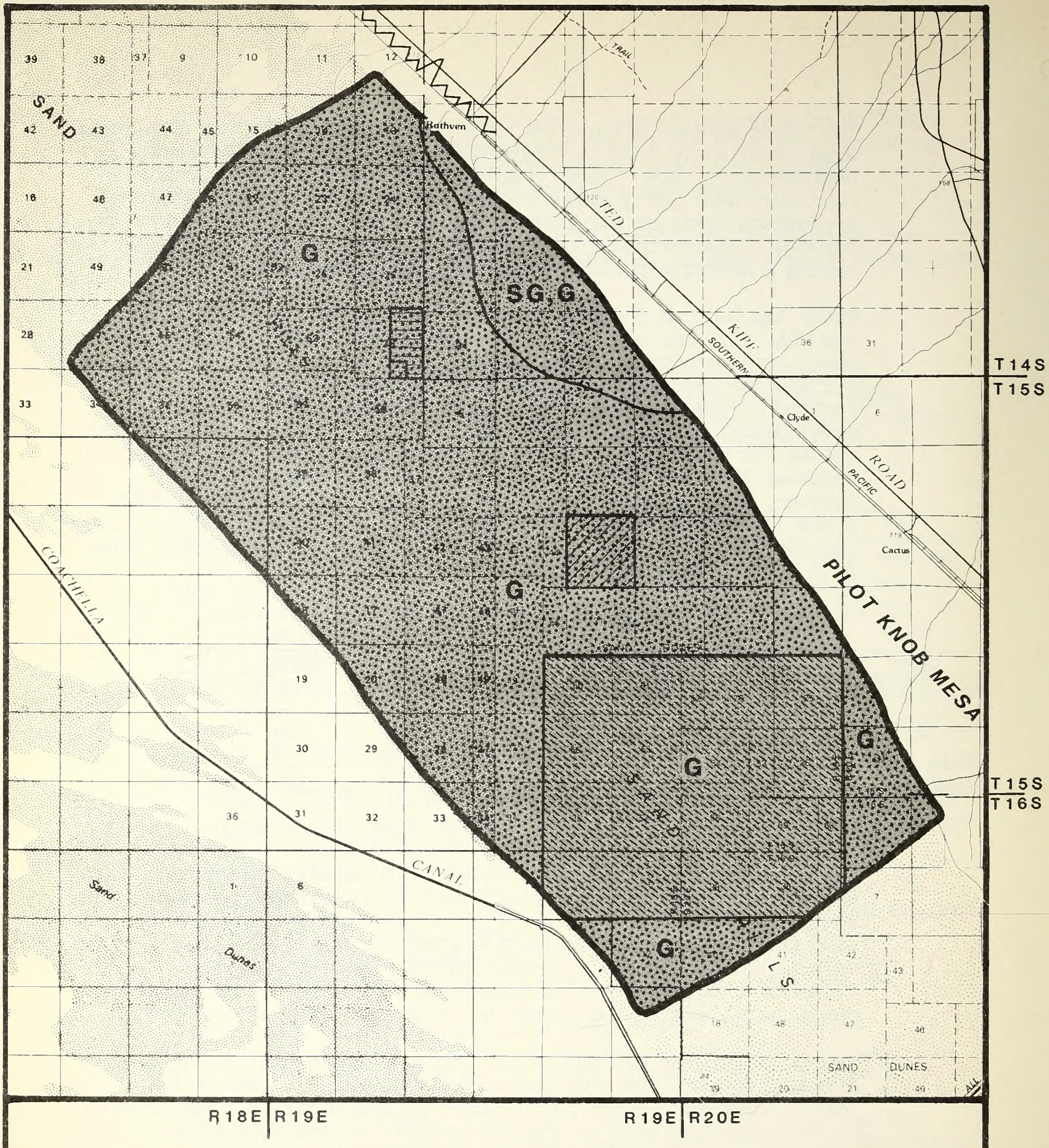
Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	N/A	0	0	N/A	0	0
Placer	N/A	10	10	N/A	400	400
Mill Site	N/A	0	0	N/A	0	0
Total	N/A	10	10	N/A	400	400

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Under low intensity management, as prescribed by the 1987 Imperial Sand Dunes Recreation Area Management Plan (RAMP), there will be no immediate impact. Over the long term, existing naturalness and solitude will gradually decline with projected gradually increasing OHV use of the area. Wilderness values will also experience major, though site specific, negative impacts as the result of geothermal energy development.

2. Impact on Habitat of Candidate Threatened/Endangered Plant and Animal Species: The proposed action will have a minor negative impact. Monitoring and patrol efforts, and mitigation measures to be stipulated as part of any authorized resource development activities, will assure that sensitive species receive adequate protection. The effect of recreation use will be evaluated through extensive baseline data and monitoring studies to be undertaken as outlined in the 1987 Imperial Sand Dunes RAMP. Annual review will provide a basis for establishing additional protective measures, if necessary.


SAND
Ruthven
TRAIL
TED
KIPP
SOUTHERN
PACIFIC
ROAD
Clyde
Cactus
PILOT KNOB MESA
COACHELLA
CANAL
Sand
Dunes
SAND
SAND DUNES
SG,G
G
T14S
T15S
T16S
R18E
R19E
R20E

NONE	Recommended for Wilderness
▨	Recommended for Non Wilderness
▦	Land outside WSA Recommended for Wilderness
▥	Split Estate
▤	State
▨	Private

Explanation

▧	High Potenial for the Occurrence of Energy and/or Non-energy Minerals
░	Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M	Moderate Mineral Potential Location in a High Mineral Potential Area
H	High Mineral Potential Location in a Moderate Mineral Potential Area

Commodity Symbols

G Geothermal
SG Sand (glass)

N

0 1 2 3
MILES

South Algodones Dunes
Mineral Resource Potential

MAP-2
CDCA-362

3. Impact on Geothermal Exploration and Development: The high potential KGRA will continue to be available for geothermal leasing.

4. Impact on Oil and Gas Exploration and Development: The area will continue to be available for leasing. However, potential for oil and gas resources in this area is low and development unlikely.

5. Impact on Glass Sand Extraction: The area within the WSA identified as having moderate potential will continue to be available for material sales. However, no industry interest has been expressed for sites within the WSA.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the Final CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan.

1. Inventory Phase: The majority of respondents approved further study of this area and urged that consideration be given to expanding its boundaries. Some respondents felt that man's influence on the area was significant. Many other comments brought up study phase factors such as potential for geothermal development, recreation use, and protection of endangered species.

2. Study Phase: Of the 199 comments received, 119 preferred a multiple use designation for the area, primarily to accommodate motorized vehicle recreation. Statements such as the following were made concerning the need for and the effects of motorized vehicle recreation in the WSA: "This is the best motorized vehicle area in the desert for many people; it is absolutely essential since closure of the dunes north of State Route 78. Since the closure, this area is already overcrowded, with estimates of as high as 125,000 visitors on a long weekend. Further reduction of the area would increase the number of accidents which already occur. Motorized vehicle clubs provide friendly competition and family activities for enthusiasts as well as being a major force for clean up operations in the dunes. They produce significant income to Imperial County and an essential recreational outlet for visitors from Yuma and the Los Angeles-San Diego area. The impacts of vehicles on the dunes is negligible, much less than in other desert areas, because of the effects of wind and weather."

Opponents of wilderness designation for this area also stated that the dunes provide poor primitive recreational opportunities; that there is no water and no vegetative screening for solitude; and that hiking in sand is difficult. With regard to rare and endangered species, opponents of wilderness designation stated that the recreation values of the dunes far outweigh the value of protecting endemic species, and that if the dunes actually contain such species, the northern section allows a more-than-adequate haven for them. It was said that moisture, not vehicles, determines the vitality of endemic species. The following factors were said to detract from wilderness quality: Coachella Canal, a railroad, truck traffic on State Route 78, traffic on Interstate 8, military activity, Imperial Valley farms, and motorized vehicles.

Many proponents of wilderness for this area stated that the unique environment of the Algodones Dunes was the strongest reason for designating the area as wilderness. They listed many plant and animal species, including: Eriogonum, desert sunflower, Wiggins Croton, Ephedra trifarca, Hespericallis undulata, Oro banche cooperi, Astragalus lentiginosus, Palofoxia linearis, mesquite, palo verde, and horned lizard, Colorado Desert sidewinder, banded desert gecko, scarab beetle, western brush lizard, desert iguana, and fringe-toed lizard. Wilderness management was recommended as the best means to protect these species as well as the fine opportunities for primitive recreation, the scenic and stark vistas, and the outstanding spring floral displays. Several boundary adjustments were recommended. Many supporters of wilderness felt that the boundaries were unmanageable and needed to be expanded to include eligible surrounding land. They interpreted the boundaries as an accommodation of motorized vehicle interests and not a strict interpretation of the wilderness inventory criteria. The most common recommendation was to use the Coachella Canal, State Route 78, the railroad, and Interstate 8 as the western, northern, eastern, and southern boundaries, respectively. Several suggested that the Gecko Campground area and Osborne County Park and the surrounding heavy use area be excluded.

Thirty-two comments were received in response to the Public Input Workbook (3/15/79). Twenty-eight favored wilderness consideration for WSA 362, while four opposed it. Most proponents mentioned the need to expand the area to the north and south, along with the outstanding ecological values of this dune system. Opponents of wilderness status wanted the area open for vehicle use, which they claimed had not damaged the area during many years of use.

3. Draft Plan Alternatives: Several public comments with a variety of opinions were received in response to the Draft CDCA Plan alternatives. Some were in agreement with the all wilderness recommendation; some wanted more wilderness than what was recommended. Others approved the no wilderness recommendation. Many noted the rare and endangered plant and animal species which were said to reside in the study area. One respondent stated that

exploration for and development of oil, gas, and geothermal resources under the No Action alternative were the best uses of this WSA.

The National Outdoor Coalition, made up of mining, rockhounding, and OHV groups, recommended that the WSA not be designated wilderness, and that it be made available for high intensity multiple use management. The Sierra Club and other conservation organizations favored wilderness designation. Members of these groups submitted thousands of letters and coupons supporting their respective positions.

4. Proposed Plan: Conservation oriented organizations and individuals made a concentrated effort to change the recommendation of the proposed plan and have this WSA recommended for wilderness designation. Hundreds of letters made this request. Respondents noted the excellent scenic values and the opportunities for wilderness recreation, as well as the need to protect the rare plant and animal species found here. In contrast, off-highway vehicle enthusiasts favored the Plan's recommendations for WSA 362 because of the traditional use of this area for OHV recreation.

   No comments were received from local governments.

Jacumba

CDCA 368

JACUMBA MOUNTAINS WILDERNESS STUDY AREA (WSA)

(CDCA-368)

1. THE STUDY AREA --- 32,837 acres

The Jacumba Mountains WSA is located in southwestern Imperial County on the southern boundary of the California Desert Conservation Area (CDCA). Nearest cities are El Centro and Calexico, approximately 30 miles east; and San Diego, 70 miles west. The study area contains 30,611 acres of public land under the jurisdiction of the Bureau of Land Management (BLM), 629 acres of State land, and private inholdings totalling 1,597 acres (see Map 1 and Table 1).

Interstate Highway 8 and State Highway 98 form the WSA's northwestern boundary. The west boundary leaves the freeway near the head of In-Koh-Pah Gorge to avoid a utility corridor designated by the CDCA Plan, continuing southwesterly until it meets the Smugglers Cave Road. The boundary then follows this road until it meets the U.S.-Mexican border, which forms the WSA's south boundary. The eastern boundary runs through public land, excluding areas lacking wilderness characteristics. The northern boundary follows section lines for about two miles, then swings northwest to meet Highway 98. Dirt roads provide access to the WSA boundary at a number of points. Four-wheel drive vehicle access into the interior of the WSA is available via the cherrystemmed Davies Valley Road.

The Jacumba Mountains are situated on the eastern flank of southern California's coastal peninsular ranges. The Jacumbas extend from Carrizo Canyon in Anza-Borrego Desert State Park to the international border approximately 20 miles to the southeast. Most of the range north of Interstate Highway 8 has been included in the Anza-Borrego Desert State Park Wilderness. The Jacumba Mountains WSA occupies the portion of the range south of Interstate Highway 8. The southern portion of the Jacumbas encompassed by the WSA is distinctively different from the northern portion within the State Park. Whereas the northern section consists primarily of one great ridge, the Jacumbas within the WSA are much broader and actually consist of several north-south trending ridges and intervening valleys. Each successive ridge is lower than the one to the west, giving the region the appearance of a great staircase descending dramatically from the peninsular ranges into the Colorado Desert.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EISs) for the CDCA Plan: protection, use, balanced, and no action; a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

28,061 acres recommended for wilderness
4,483 BLM acres recommended for nonwilderness

Eighty-five percent suitable partial wilderness is the recommendation for this WSA. The 4,483 acres in this WSA recommended nonsuitable are released for uses other than wilderness. In addition to the Federal acreage recommended for wilderness, BLM recommends that 629 acres of State lands and 1,304 acres of private lands be acquired through exchange or purchase and designated as wilderness. With acquisition of these inholdings, a total of 28,061 acres are recommended for wilderness. Appendix 1 lists all inholdings and provides additional information on their acquisition. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts. The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The partial wilderness recommendation is based on the following rationale: (1) the lands recommended for wilderness designation possess an outstanding primitive character, and designation would provide a high quality wilderness recreation opportunity only 90 minutes from the growing San Diego metropolitan area; (2) the recommended wilderness area has unique biological and cultural resources; (3) the partial wilderness recommendation will resolve conflicts between motorized and nonmotorized recreationists, providing opportunities for both types of activities; and (4) the partial wilderness recommendation will result in a readily manageable wilderness boundary.

The portion of the WSA recommended for wilderness exemplifies the qualities described in the definition of wilderness contained in Section 2(c) of the Wilderness Act. Here "the earth and its community of life are untrammeled by man," and "man himself is a visitor who does not remain." The land retains its "primeval character and influence, without permanent improvements or human habitation." Opportunities for hiking, backpacking, exploring, and other primitive and unconfined types of recreation are limited only by the stamina of the visitor. The screening effect of rugged topography insures ample opportunities for the seeker of solitude. Opportunities to enjoy picturesque desert scenery, view rare wildlife such as the peninsular bighorn sheep, and discover isolated oases of native fan palms contribute to the appeal of the region. The suitability recommendation will preclude any further vehicular use of approximately 11 miles of primitive access routes of travel.

The WSA is a land of remarkable biological diversity, having some characteristics of the adjoining chaparral and desert environments, and many characteristics unique to itself. It is an environment not duplicated elsewhere in the National Wilderness Preservation System. The Jacumba Mountains encompass a transition zone between the high coastal chaparral country to the west and the low basin of the Colorado Desert to the east. The WSA is an ecological staircase, the steps of which are a series of intermediate habitats which allow contact between closely related chaparral and desert species. The transitional nature of the area has also resulted in environmental conditions similar to those of more southerly regions, allowing plants and animals characteristic of Baja California to range into the United States. BLM designated the Jacumba Mountains Outstanding Natural Area in 1975, in recognition of the area's uniqueness.

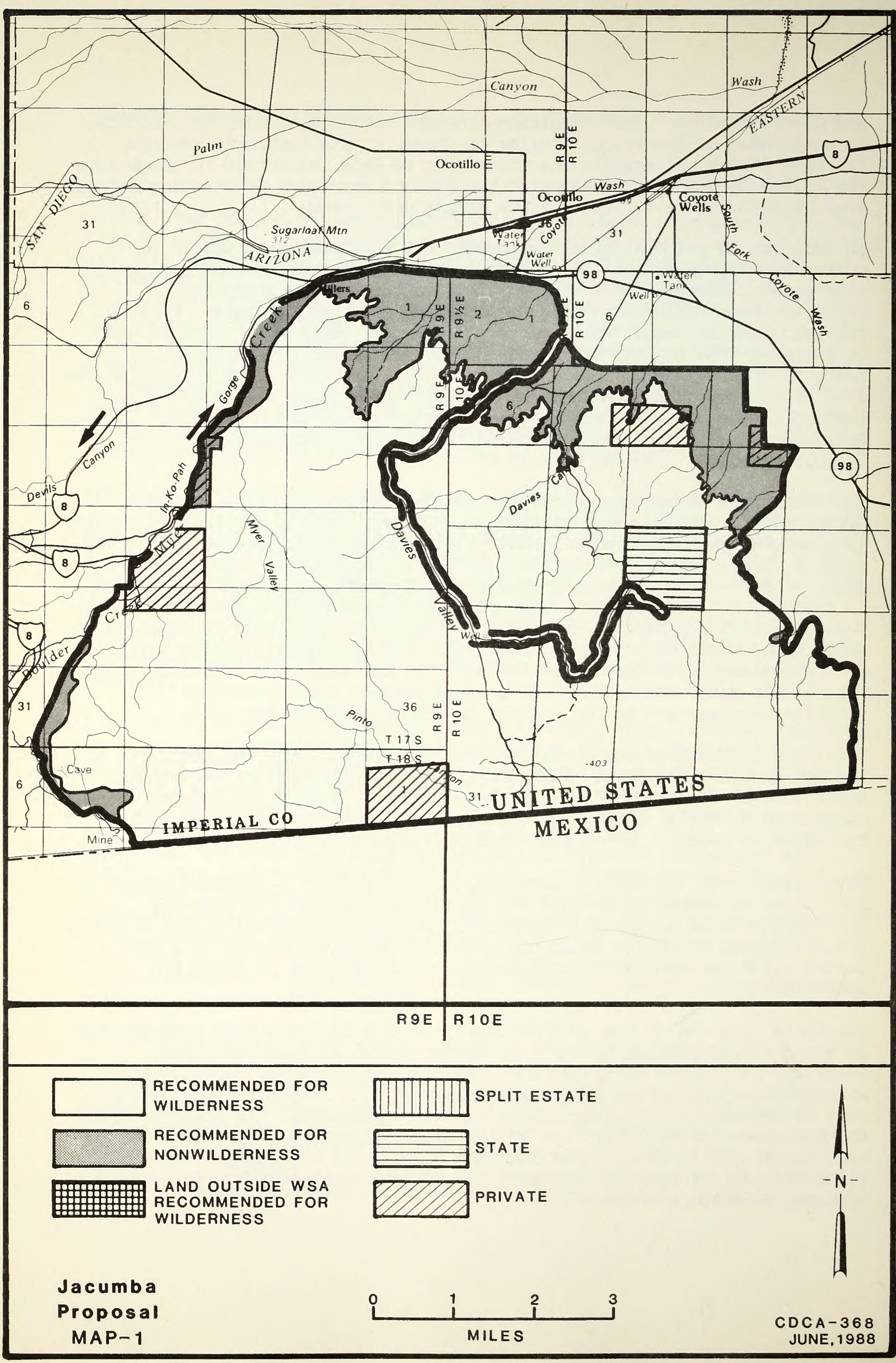
In addition to its biological resources, the WSA contains a wealth of cultural resource sites. It is expected that wilderness designation would help protect these sites from vandalism, since previous incidents of depreciative behavior have been concentrated near vehicle ways. Numerous prehistoric base camps, which served as seasonal centers for hunting and gathering in the region, are found in Myer Valley and Davies Valley. Accounts of prehistoric incidents at some of these base camps survive in the oral traditions of modern Kumeyaay Indians. Many sites are eligible for listing on the National Register of Historic Places, and a National Register nomination is being prepared for an important district in Myer Valley.

In addition to outstanding primitive recreation opportunities, the WSA offers significant opportunities for off-highway vehicle touring and camping in a natural environment, and other traditionally vehicle based activities such as rockhounding. Recreation user conflicts occur at times in those areas of the WSA used for both primitive and semi-primitive motorized types of recreation. The recommended partial wilderness alternative will resolve these conflicts, enhancing primitive recreation on the lands recommended for wilderness, which encompass the most sensitive biological, geological, and archaeological resources within the WSA. At the same time, opportunities for vehicle based recreation will be preserved on the recommended nonwilderness portion of the WSA and on other nearby public lands.

The lands recommended for nonwilderness are located along the periphery of the WSA on the west, north, and east. The nonsuitable lands are readily accessible to off-highway vehicles from adjacent roads and highways, and contain an extensive network of off-highway vehicle routes. This portion of the WSA also contains areas disturbed by mining activity.

The exclusion of the lands recommended nonsuitable for wilderness would contribute to a more manageable and identifiable wilderness boundary following natural topographic features. The recommended wilderness boundary follows rugged mountains which preclude vehicle access except at a few points which can be controlled through the installation of gates and barricades.

The WSA's location on the international boundary requires that consideration be given to the mission of the U.S. Border Patrol in ensuring border security. A 60-foot strip of land along the international boundary is withdrawn to provide for patrol and detection of aliens and smugglers as well as maintenance of international boundary monuments. In accordance with the precedent set by Public Law 95-625 (designating Organ Pipe Cactus Wilderness), it is recommended that the boundary of the Jacumba Mountains Wilderness be set back 60 feet from the international boundary to correspond with the existing withdrawal.


Canyon
Wash
EASTERN
Palm
8
Ocotillo
R 9 E
R 10 E
SAN DIEGO
31
Sugarloaf Mtn
312
ARIZONA
Ocotillo
Wash
36
Water Tank
Coyote
Water Well
Coyote Wells
South Fork
31
98
Water Tank
Well
Coyote Wash
T16S
T16 1/2S
T17S
6
Millers
Creek
Gorge
1
R 9 E
R 9½ E
2
1
R 10 E
6
R 9 E
10 E
6
Canyon
Devils
8
In-Ko-Pah
Myer
Myer
Valley
Davies
Davies
Valley
98
8
Creek
8
Boulder
31
Well
36
Pinto
T 17 S
T 18 S
R 9 E
R 10 E
Cave
6
403
1
Canyon
31
UNITED STATES
MEXICO
IMPERIAL CO
Mine
R9E
R10E
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES

Jacumba Proposal MAP-1

CDCA-368
JUNE, 1988

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	30,611
Split Estate	(BLM surface only)	0
Inholdings		
State		629
Private		1,597
Total		32,837

Within the Recommended Wilderness Boundary		Acres
BLM	(within WSA)	26,128
BLM	(outside WSA)	0
Split Estate	(within WSA)[1]	0
Split Estate	(outside WSA)[1]	0
Total BLM Land Recommended for Wilderness		26,128
Inholdings[1]		
State		629
Private		1,304

Within the Area Not Recommended for Wilderness		Acres
BLM	(surface and subsurface)	4,483
Split Estate	(BLM surface only)	0
Total BLM Lands Not Recommended for Wilderness		4,483

---

[1] Appendix 1 is a detailed description of inholdings and split estate tracts included within the study. For purposes of this report, split estate lands are defined only as those lands with Federal surface and non Federal subsurface (minerals). Lands that have Federal minerals but non Federal surface should be classified in this report by the owner of the surface estate.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The portion of the WSA recommended for wilderness is essentially untrammeled by man. The only signs of man are archaeological features such as trails, cleared circles, and grinding surfaces; posts and other monuments associated with mining claim location; prospect holes and other minor disturbances associated with mining claim annual assessment work (primarily on claims predating interim WSA management); cabin ruins; and a few off-highway vehicle ways. All of these man-made features are substantially unnoticeable within the WSA as a whole. The portion of the WSA recommended for nonwilderness contains an extensive network of primitive ways, and areas disturbed by mining activity.

2. Solitude: Opportunities for solitude are abundant in the portion of the WSA recommended for wilderness. At present, human use is very limited. Even if visitation increases dramatically, the size of the area and screening effect of rugged topography will work to preserve opportunities for solitude. While the recommended nonwilderness portion of the WSA currently receives the most recreation use, visitation is low enough that opportunities for solitude are still available, particularly on weekdays.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: Opportunities for primitive recreation are limited only by the necessity for the wilderness user to carry water into the area. The area presents numerous opportunities for hiking, backpacking, sightseeing, nature photography, nature study, wildlife viewing, and hunting under primitive conditions. On the recommended nonwilderness portion of the WSA, the quality of primitive recreation opportunities are slightly reduced by the greater concentration of human alterations to the natural environment. The presence of primitive vehicle ways and evidence of mining activity decrease a visitor's sense of remoteness.

4. Special Features: Each of the four transitional stair steps within the WSA is a separate region, containing a slightly different set of special features. For ease of discussion, from west to east these regions will be referred to as the Smugglers Cave Escarpment, the Myer Valley/Pinto Canyon region, Davies Valley, and the Eastern Mountains/Skull Valley region. The westernmost portion of the Smugglers Cave Escarpment contains about 4,000 acres of southern chaparral vegetation, which provides habitat for mule deer,

peninsular bighorn sheep (listed as rare by the State of California), golden eagles and other birds of prey, and a host of other species. One Mexican species, the Trinidad Merriam kangaroo rat, ranges north of the international boundary only in this area.

The ranges of most sensitive plants include portions of both the Smugglers Cave Escarpment and the Myer Valley/Pinto Canyon region to the east. The single most highly sensitive species in the WSA is a very rare locoweed, Astragalus douglasii var. perstrictus. It, along with the San Diego monkeyflower (Diplacus aridus) and the Mountain Springs lupine (Lupinus excubitus var. medius), are candidates for listing as threatened or endangered by the US F&WS. An additional six species in the western half of the WSA are considered rare in the State of California by the California Native Plant Society (CNPS). These are the Jacumba gilia (Ipomopsis tenufolia), the elephant tree (Bursera microphylla), Pholisma arenarium, Mentzelia hirsutissima var. stenophylla, Geraea viscida, and the Cleveland penstemon (Penstemon clevelandii var connatus).

The Myer Valley/Pinto Canyon region contains small oases of native California fan palms nestled in isolated canyons along the base of the Smugglers Cave Escarpment and in Pinto Canyon. One of the main oases is at Mortero Spring, on the State land proposed for acquisition. The palms provide specialized nesting habitat for hooded orioles in May and June, and also provide shade and habitat for other wildlife. Seeps and springs at the palm oases and at other locations provide valuable water sources for all types of wildlife, including amphibians. The Myer Valley/Pinto Canyon region is actually a maze of valleys and canyons separated by boulder strewn ridges typical of the western half of the WSA. The difficult terrain limits human access, but provides protection for sensitive species such as the peninsular bighorn sheep. Many of the boulder formations in this area possess "cap rocks," thin layers of exfoliating granite which are separated from the main rock mass by a narrow space. The spaces under the cap rocks provide habitat for a number of reptile species, including the barefoot gecko, Anarbylus switaki, which is more commonly found far to the south in Baja California. This gecko was first discovered north of the border in this area, and is officially listed as rare by the State of California. Its distribution in the United States is limited to within 20 miles of this WSA. The Myer Valley/Pinto Canyon region contains numerous cliff areas that provide nesting sites for falcons, golden eagles, and other birds of prey, and favorable lambing sites for the Peninsular Bighorn Sheep.

The rich and varied plant and animal life of the Myer Valley/Pinto Canyon region attracted both the Kumeyaay and Cocopah Indians into historic times. They established a number of base camps which were occupied on a seasonal basis. Archaeologists have found extensive evidence of prehistoric life at these sites, including stone tools, cooking hearths, pottery fragments, stone mortars, and grinding surfaces on granite outcrops. Agave represented an extremely important food source for these people, and the remains of agave roasting pits are frequently encountered. The area is also noteworthy as a source of stone material used in prehistoric tool manufacture. A number of campsites in Myer Valley figure in the oral history of the modern Kumeyaay people. Archaeologists have documented a number of incidents of prehistoric conflicts between the Cocopah and Kumeyaay in this area from modern Kumeyaay informants. Some sites contain human cremations. Many cultural resource sites within the Myer Valley region are eligible for inclusion on the National Register of Historic Places. Documentation is being prepared to nominate several Myer Valley base camps as an archaeological district. Research within this district focuses on prehistoric population movement caused by environmental stress.

Rugged mountains separate Myer Valley from Davies Valley to the east. Davies is the largest valley in the WSA, averaging a mile in width and extending more than five miles north from the Mexican border. The cultural resources of Davies Valley are similar to those of Myer Valley. Numerous prehistoric base camp locations have been identified in Davies Valley, many of which are eligible for inclusion on the National Register of Historic Places. In addition, the presence of large areas of "desert pavement" (deposits of surface cobbles colored by a dark patina of oxidized manganese) in this area and in portions of the WSA further to the east contributes to the preservation of archaeological features not commonly seen in Myer Valley. Light colored cleared circles (thought to mark the sites of resting or ritual areas) and aboriginal trails stand out prominently against the dark desert pavement.

The Eastern Mountains/Skull Valley portion of the WSA contains two plant species considered rare in California by the CNPS. Ayenia compacta occurs in canyon areas, while the crucifixion thorn (Castela emoryi) is found in a single stand in Skull Valley, one of the least disturbed stands of this plant in California. Skull Valley is a closed basin with a sink or dry lake bed on its floor. Archaeologists have discovered a ring of prehistoric campsites encircling the lake bed. Much of the valley floor outside the lake bed is desert pavement, upon which are preserved numerous aboriginal cleared circles and a number of crisscrossing aboriginal trails.

B. Diversity in the National Wilderness Preservation System (NWPS)

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 30,611 acres of the American Desert/Creosote Bush-bur Sage ecosystem. The Jacumba Mountains WSA encompasses a unique ecotone or transition zone between the Southern California Coastal Chaparral and the Colorado subdivision of the Sonoran Desert. The flora and fauna of the area are influenced by its transitional location and by its proximity to

Baja California. A number of typically Mexican wildlife species such as the Trinidad Merriam kangaroo rat and the barefoot gecko (listed as rare by the State of California) range north of the border only in this WSA and the surrounding area. The ranges of closely related chaparral and desert species (such as the Pacific and California tree frogs) overlap in the WSA, resulting in conditions favorable for hybridization. In all, the WSA is a land of remarkable ecological diversity which encompasses a variety of transitional environments found in no other WSA in the CDCA and not currently protected in any unit of the NWPS.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas		Other BLM Studies	
	areas	acres	areas	acres
	NATIONWIDE			
American Desert/Creosote Bush-bur Sage	3	126,033	48	1,541,866
	CALIFORNIA			
American Desert/Creosote Bur-bur Sage	2	26,472	20	947,405

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of five major population centers, and is only 90 minutes from San Diego. Table 3 summarizes the number and acreage of wilderness areas and other BLM study areas within a five-hour drive of these population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas		Other BLM Studies	
	areas	acres	areas	acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Oxnard-Ventura	23	2,195,198	85	2,703,260
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814

3. Balancing the geographic distribution of wilderness areas: The closest designated area is the Anza-Borrego Desert State Wilderness approximately eight air miles west. Within 50 air miles are three additional areas: the Forest Service administered Hauser and Pine Creek Wilderness Areas, and Cuyamaca Mountains State Wilderness. Four other BLM study areas recommended for wilderness designation are within 50 air miles of the Jacumba Mountains WSA.

C. Manageability

The Jacumba Mountains WSA is manageable as wilderness. However, there are significant differences in the ease of manageability between the recommended wilderness and nonwilderness portions.

The west, north, and east boundaries of the area recommended for wilderness follow readily identifiable topographic features which will effectively limit inadvertent incursions by motorized vehicles. The south boundary along the international border is for the most part located in rugged mountains, and is posted with monuments at periodic intervals. Additional posting may be required in order to prevent inadvertent border crossings by hikers. The U.S. Border Patrol will periodically need to enter the wilderness with motorized vehicles in order to meet temporary emergencies. Such use is consistent with BLM Wilderness Management Policy. (See the addendum to this report, "Management Issues," for a detailed discussion of this topic).

Manageability of the recommended wilderness area would be significantly improved by acquisition of inholdings. The State of California and private inholdings proposed for acquisition and incorporation into the wilderness contain outstanding wilderness resources. All are in an undeveloped, pristine condition. Two of the parcels contain important hiking routes necessary for public access into and between different sections of the wilderness, in addition to important wildlife habitat and cultural resources.

There is some potential for a manageability conflict between maintenance of wilderness values and exercise of valid existing rights. There are 23 unpatented mining claims within the recommended wilderness. Development of valid claims could proceed subject to not causing unnecessary and undue degradation as defined in BLM's Wilderness Management Policy, making it likely that wilderness values would be adversely affected. Continued maintenance of high quality wilderness values could be assured through acquisition of valid existing rights.

The portion of the WSA recommended for nonwilderness would be difficult to manage for the preservation and enhancement of wilderness values, because of the conflicting uses which occur there, primarily motorized recreation on an extensive network of primitive vehicle ways. Traditional motorized recreation activities include rockhounding, four-wheel drive touring and camping, and hunting.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: Prior to publication of the CDCA Plan, BLM prepared a Geology-Energy-Mineral (G-E-M) Report for the Yuha Desert G-E-M Resource Area (GRA), of which the WSA is a part. However, the CDCA Plan did not fully analyze and interpret the Yuha Desert GRA Report as it specifically relates to this WSA. The GRA Report shows the western and north-central portions of the WSA to have high potential for limestone (See Map 2). The western, central, and eastern portions of the study area are classified as having a moderate potential for tungsten. The GRA Report shows high potential for the occurrence of sand and gravel resources along the eastern edge of the WSA, based on past production immediately outside the boundary. (The Yuha Desert GRA Report is a BLM administrative report available in the California Desert District G-E-M resource files.)

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Recommendation: From 1983 to 1985 the U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (BOM) conducted field examinations of the recommended wilderness portion of the WSA. In 1987, USGS and BOM released a joint report on the study area, U.S. Geological Survey Bulletin 1711.

   USGS and BOM report identified three areas in the northern part of the WSA as having a high potential for limestone, expanding the area identified in BLM's GRA Report. A fourth area in the recommended suitable southeastern portion of the WSA was also classified as having a high potential for limestone, based on two prospect locations and known occurrence of limestone. This area was not identified in the 1980 GRA Report. These resources are estimated at 1.8 million tons of limestone.

   USGS and BOM classified the southwestern tip and east-central portion of the WSA as having low tungsten potential. This classification is lower than that assigned by the 1980 BLM GRA Report. However, under the BLM classification system, the geologic inference combined with the known deposits and occurrences of tungsten warrant a moderate potential for occurrence of tungsten resources. Morton (1977, Geology and Mineral Resources of Imperial County, County Report 7, California Division of Mines and Geology) cited the recovery of 2,000 tons of tungsten oxide in 1954 from mines in the southwestern portion of the WSA. Map 2 reflects the 1980 GRA classified areas, the USGS and BOM classification, and changes to the GRA classified areas.

USGS and BOM identified montmorillonite in the recommended suitable northwestern portion of the WSA, but did not classify the area for mineral occurrence potential. Garnet and opal was identified in the recommended suitable northwestern part along with diatomite. Because of the poor quality of material, none of these actual occurrences were classified for their occurrence potential in the joint report, and are not shown on Map 2.

The WSA is within the In-Ko-Pah Mining District. In 1983, 106 claims were within the WSA according to the joint report. Unpatented mining claims located within the WSA are summarized in the following table taken from BLM records dated December, 1987. All lode mining claims are located within the northern and central portions of the WSA. As of December 31, 1987, four oil and gas leases were in effect in the WSA. These leases expire in 1992.

Table 4 - Mining Claims

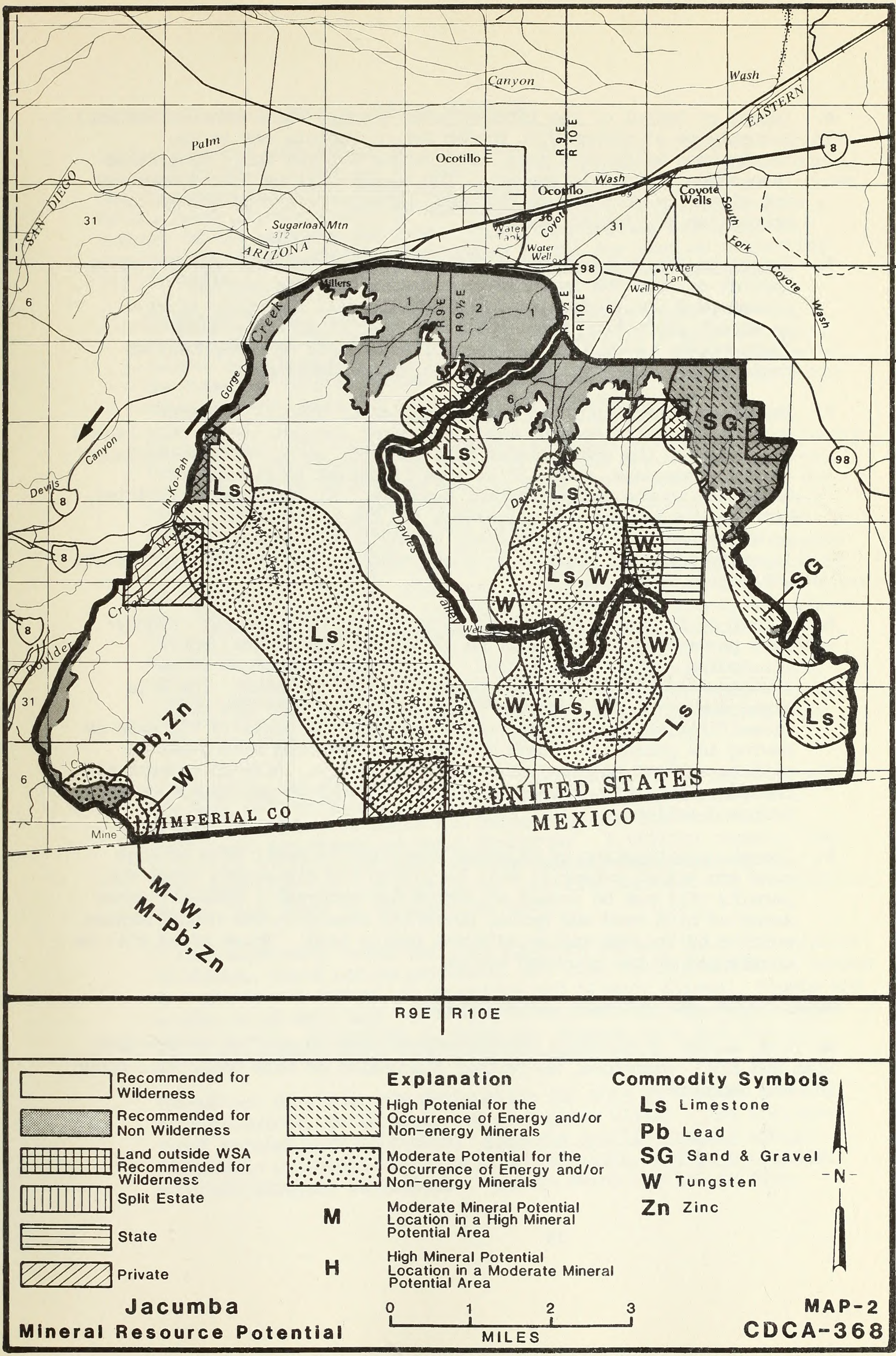
TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	23	3	26	460	60	520
Placer	0	0	0	0	0	0
Mill Site	0	0	0	0	0	0
Total	23	3	26	460	60	520

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: The proposed action will close approximately 11 miles of vehicle ways, thereby improving opportunities for primitive recreation by eliminating conflicts with motorized recreation. On the nonwilderness portion of the WSA, the cumulative effect of continuing OHV recreation and other multiple uses will result in minor adverse impacts to naturalness over the long term. Some site specific impacts on wilderness values will occur if any valid mining claims are developed.

2. Impact on Motorized Recreation: The closure of 11 miles of vehicle ways will reduce existing opportunities for semi-primitive motorized recreation. Motorized activities such as rockhounding, camping, and touring can continue to take place on the nonwilderness portion of the study area, as well as on the cherrystemmed portion of Davies Valley Road.

3. Impact on Cultural Resources: Within the wilderness portion of the study area, extensive archeological sites will be protected from vandalism through closure of 11 miles of vehicle ways. (Illegal excavation and destruction of these resources has usually occurred along vehicle ways). However, access for scientific research will be reduced, and strict limitations will be placed on scientific excavation. On the nonwilderness portion impacts will be negligible, since the majority of important sites are outside this area.


Canyon
Wash
EASTERN
Palm
Ocotillo
R9E
R10E
8
SAN DIEGO
Ocotillo
Wash
Coyote Wells
31
Sugarloaf Mtn
312
ARIZONA
Water Tank
Coyote
Water Well
South Fork
T16S
98
Water Tank
Well
Coyote
Wash
T16 1/2S
6
Millers
1
R9E
R9½E
2
1
R9½E
R10E
6
Creek
Gorge
T17S
6
SG
Canyon
Ls
98
Devils
8
In-Ko-Pah
Ls
Ls
Davies
8
Mu
Creek
W
Ls, W
W
SG
Ls
Davies Valley
Well
8
W
Boulder
31
W
Ls, W
Ls
Ls
Pb, Zn
R9E
R10E
T17S
T18S
W
6
Cave
UNITED STATES
IMPERIAL CO
MEXICO
Mine
M-W, M-Pb, Zn
R9E
R10E
Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M
Moderate Mineral Potential Location in a High Mineral Potential Area
H
High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
Ls Limestone
Pb Lead
SG Sand & Gravel
W Tungsten
Zn Zinc
N
0
1
2
3
MILES

Jacumba
Mineral Resource Potential

MAP-2
CDCA-368

4. Impact on Patrol of the International Border: Some constraints will probably be placed on U.S. Border Patrol vehicle use in the recommended wilderness area, to a degree not yet fully determined (see addendum to this report). End result will be that agents may not always be able to use the most convenient form of access to accomplish particular tasks.

5. Impact on Peninsular Bighorn Sheep Habitat: The high quality sheep habitat of this WSA is fully contained within the portion recommended for wilderness. The habitat will therefore receive permanent protection from activities that alter the natural environment. Some minor site specific impacts on sheep habitat could occur if any valid mining claims are developed.

6. Impact on Other Plant and Animal Species of Special Concern: Habitat for three Federal candidate plant species, eight CNPS listed species, and the State listed rare barefoot gecko, will be included in the wilderness, where it will be preserved in its natural condition to the maximum extent possible. All proposed activities, both in the recommended wilderness and the recommended nonwilderness, will be subjected to environmental analysis to identify potential impacts to these species, and develop appropriate mitigating measures.

7. Impact on Locatable Mineral Exploration and Development: Eighty-five percent of the WSA will be withdrawn from mineral entry, precluding further exploration. Significant resources to be foregone are limestone (high potential) and tungsten. There is disagreement on the tungsten potential of the WSA; the BLM classification is moderate, while the USGS/BOM classify the area as having low potential. Development of 23 existing mining claims will be subject to proof of a valid discovery. Fifteen percent of the WSA, containing three mining claims, will be unaffected by the proposed action.

8. Impact on Extraction of Saleable Minerals: A small area of high sand and gravel potential will be within the wilderness area, and permits will not be issued to remove any material. However, other areas of high sand and gravel potential remain in the nonwilderness portion of the WSA and on adjacent public land. These areas will be unaffected by the proposed action.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Known inaccuracies are noted in parentheses, as are explanations deemed useful for readers evaluating the comments.

1. Inventory Phase: Comment was evenly divided between those who favored wilderness designation based on wilderness and ecological values, and those who felt the natural values had been impaired by the numerous vehicle routes. The area was field checked again and additions and deletions have been made accordingly.

2. Study Phase: This WSA generated 92 comments, with a slight majority favoring a nonwilderness designation for the area. The principal argument against wilderness was the need for vehicular access for family recreation. Pinto Canyon and Mountain Springs were other areas noted as recreation sites requiring vehicle access. Myer Valley and Davies Valley, in particular, were cited as too damaged by man's impacts and too popular as camping areas to be considered as wilderness. Bighorn sheep and petroglyphs can be viewed here and in other locations within the WSA. The San Diego County Council of Gem and Mineral Societies, which represents 17 rockhounding clubs, cited the area as the main garnet collecting spot in the southern desert, and listed the following minerals as present: rhyolite, pyrite, selenite, petrified wood, cryptocrystalline quartz, spinel, jasper, and agate. Other family activities popular in this were nature studies, photography, picnicking, and hunting.

   Geothermal, oil, and gas potential was identified as existing within the WSA, with possible important spinoff benefits for Imperial County Department of Parks and Recreation and the State of California Department of Water Resources. A utility company, San Diego Gas and Electric, stated that closing this area would interfere with utility corridors. (Utility Corridor "N," identified in the CDCA Plan, is outside the WSA.)

   A few respondents noted that the southern border, which is adjacent to Mexico, could not be protected, and that vehicle access is needed for government control of smugglers and illegal aliens. Sights and sounds which were said to detract from wilderness quality included radio towers, Interstate 8, Route 98, Plaster City and Ocotillo, past and present mines, and aircraft overflights.

   Supporters of wilderness designation for this area noted its high archaeological, geological, and ecological values. The following plant species were mentioned: Krameria gravii, Castela emoryi, Simmondsia chinensis, Mamillaria tetrancistra, Argemone cormbosa, and Hoffmanseggia densiflora. Bighorn Sheep habitat is here.

Paleontological and archaeological values are extensive and warrant wilderness protection. Motorized vehicles were said to be a source of severe damage to this environment, causing soil disturbance which harms the ecosystem, as well as damaging the solitude of other users.

Primitive recreation activities noted as popular in this area include backpacking, hiking, photography, rock climbing, and nature study. Scenic values are high, with vistas of the Yuha Desert and the shoreline of ancient Lake Cahuilla. Wilderness designation would also enhance the wilderness qualities of nearby Anza-Borrego Desert State Park.

Numerous comments were received in response to the workbook. Several comments in favor of wilderness favored preserving this area for wilderness. Palm oases and bighorn sheep were mentioned, as were other outstanding wilderness values. It was suggested that the boundaries be expanded to include surrounding areas. Several comments expressed the desire to maintain existing use of the area since it is a good motorized vehicle area. Another comment from San Diego Gas and Electric Company indicated that the western boundary contains tracts owned by CalTrans. They recommended a boundary change.

3. Draft Plan Alternatives: Public comments generally favored the partial wilderness recommendation for this WSA. The Imperial County Planning Department disagreed with all three alternatives and proposed moderate intensity multiple use. They said that a wilderness designation would conflict with the County General Plan which calls for recreation in this area.

   The National Outdoor Coalition (NOC), a coalition of mining, rockhounding, and ORV groups, recommended low intensity multiple use for most of this WSA. The Sierra Club and other conservation organizations favored wilderness classification. Members of these organizations sent in thousands of letters and coupons supporting their respective positions.

4. Proposed Plan: Comments and positions of governmental agencies and special interest groups were similar to those described above.

APPENDIX 1
ESTIMATED COSTS OF ACQUISITION OF NON-FEDERAL HOLDINGS WITHIN AREAS RECOMMENDED FOR DESIGNATION
JACUMBA WSA (CDCA-368)

	LEGAL DESCRIPTION						TYPE OF OWNERSHIP BY ESTATE				ESTIMATED COST OF ACQUISITION	
PARCEL No.	TWNSHP	RNG	SEC	MERIDIAN	TOTAL ACREAGE	NUMBER OF OWNERS	SURFACE ESTATE	SUBSURFACE ESTATE	PRESENTLY PROPOSED FOR ACQUISITION	PREFERRED METHOD OF ACQUISITION	LAND COSTS ($1000)	PROCESSING COSTS ($1000)
1	17S.	10E.	4	SBM	*(240)	5	PRIVATE	PRIVATE	YES	PURCHASE	(24.0)	(2.5)
2	17S.	10E.	5	SBM	*(80)	5	PRIVATE	PRIVATE	YES	PURCHASE	8.8	2.5
3	17S.	10E.	16	SBM	640	1	STATE	STATE	YES	PURCHASE	N/A	4.0
4	18S.	9E.	1	SBM	*	1	PRIVATE	PRIVATE	YES	PURCHASE	*	2.5
5	18S.	9E.	1	SBM	(654)	13	PRIVATE	PRIVATE	YES	PURCHASE	(65.4)	(32.5)

* Indicates that exact parcel acreage is unknown. Total acreage for all parcels in a particular section are shown in ( ).

These figures were derived from Bureau Land Records and provide for more detail than GIS estimates and therefore may differ from acreage summaries in Table 1.

Fish Creek Mountains

CDCA 372

FISH CREEK MOUNTAINS WILDERNESS STUDY AREA (WSA)

(CDCA-372)

1. THE STUDY AREA --- 18,804 acres

The Fish Creek Mountains WSA is located in western Imperial County, in the southern portion of the California Desert Conservation Area (CDCA). The nearest cities are Brawley, 50 miles east; Indio, 60 miles north; and San Diego, 110 miles west. The WSA contains 17,626 acres of public land under the jurisdiction of the Bureau of Land Management (BLM), a 40-acre state and 1,138 acres of private land (see Table 1 and Map 1).

From the northwest corner, the WSA boundary follows the U.S. Gypsum Company railroad southeast to its intersection with Carrizo Wash. The boundary then follows the base of the Fish Creek Mountains south to the edge of Anza-Borrego Desert State Park (Carrizo Impact Area). The WSA boundary then coincides with the state park boundary, running north and west along section lines for about six and a half miles. The remaining five miles of the west boundary cuts northwest through a mixture of public and private lands, approximately at the base of the west slope of the Fish Creeks (See Map 1). Two-wheel drive vehicle access is available to within a short distance of the northwest corner of the WSA via the Split Mountain Road from State Highway 78. The U.S. Gypsum Company railroad maintenance road extending along the northern edge of the WSA is normally passable to two-wheel drive pickups. Four-wheel drive access is available to the eastern edge of the WSA via Carrizo Wash. The western and southern boundaries of the WSA are inaccessible by vehicle.

The Fish Creek Mountains are best characterized as an isolated highland, ten miles long by five miles wide, rising 1,500 to 2,400 feet above the surrounding landscape. In some ways the range resembles a plateau, rising dramatically as it does in a great wall above the monotonous basin of the Salton Trough. From a distance, few dramatic peaks are visible atop this plateau -- just a rolling ridgeline with an occasional discernible high point. Closer examination from an aerial perspective leaves a much different impression of the Fish Creek highland, for its crest is revealed as a rugged land of jagged rocky ridges and peaks rising up to 800 feet above twisting canyons, with occasional small open valleys situated near the heads of major drainages more than 1,500 feet above the base of the mountain range. The study area possesses a significant number of plants and animal species described in the Special Features section.

A cooperative agreement signed by BLM, the Navy, and the Bureau of Reclamation and incorporated into the CDCA Plan as 1985 Amendment 1, designated approximately 40% of the WSA to provide a restricted air space for military aircraft to approach nearby practice bombing targets without interference from general aviation traffic and other incompatible uses. Under the terms of the cooperative agreement BLM retains general surface management responsibility, but must consult with the Navy when potentially conflicting uses are proposed. The cooperative agreement area is a north to south strip through the middle of the WSA. Within that portion of the WSA east of the cooperative agreement area, the Navy has been issued a right-of-way. This authorization accommodates jet aircraft operating in an armed mode, at low levels and at speeds in excess of 500 knots, as they maneuver into position to strike a practice target to the southeast.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EIS) for the CDCA Plan, protection, use, balanced, and no action, and a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

15,466 acres recommended for wilderness

2,160 BLM acres recommended for nonwilderness

Eighty-six percent partial wilderness is the recommendation for the Fish Creek Mountains WSA. The 2,160 nonsuitable acres in this WSA are released for uses other than wilderness. A total of 15,466 acres are recommended for wilderness. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The partial wilderness recommendation is based on the following rationale: (1) the portion of the WSA recommended for wilderness contains superb wilderness values and important cultural resources; (2) the proposed wilderness area would compliment existing wilderness in Anza-Borrego Desert State Park, providing a geographic and ecological continuum between two portions of State wilderness; (3) there were believed to be few conflicts between management of the proposed wilderness area and other resource uses when the preliminary recommendations were developed and presented as part of the CDCA Plan; and (4) the portion of the WSA recommended for nonwilderness has marginal wilderness values, and when the CDCA Plan was finalized in 1980, was believed to contain considerable gypsum reserves.

The lands recommended for wilderness designation possess an outstanding primitive character which exemplifies the qualities described in the definition of wilderness in section 2(c) of the Wilderness Act. Here "the earth and its community of life are untrammeled by man," and "man himself is a visitor who does not remain." The land retains its "primeval character and influence, without permanent improvements or human habitation." Opportunities for hiking, backpacking, exploring, and other primitive and unconfined types of recreation are limited only by the stamina of the visitor. Low visitation and the screening effects of very rugged topography insure ample opportunities for the seeker of solitude. No primitive routes of travel have been identified within the WSA.

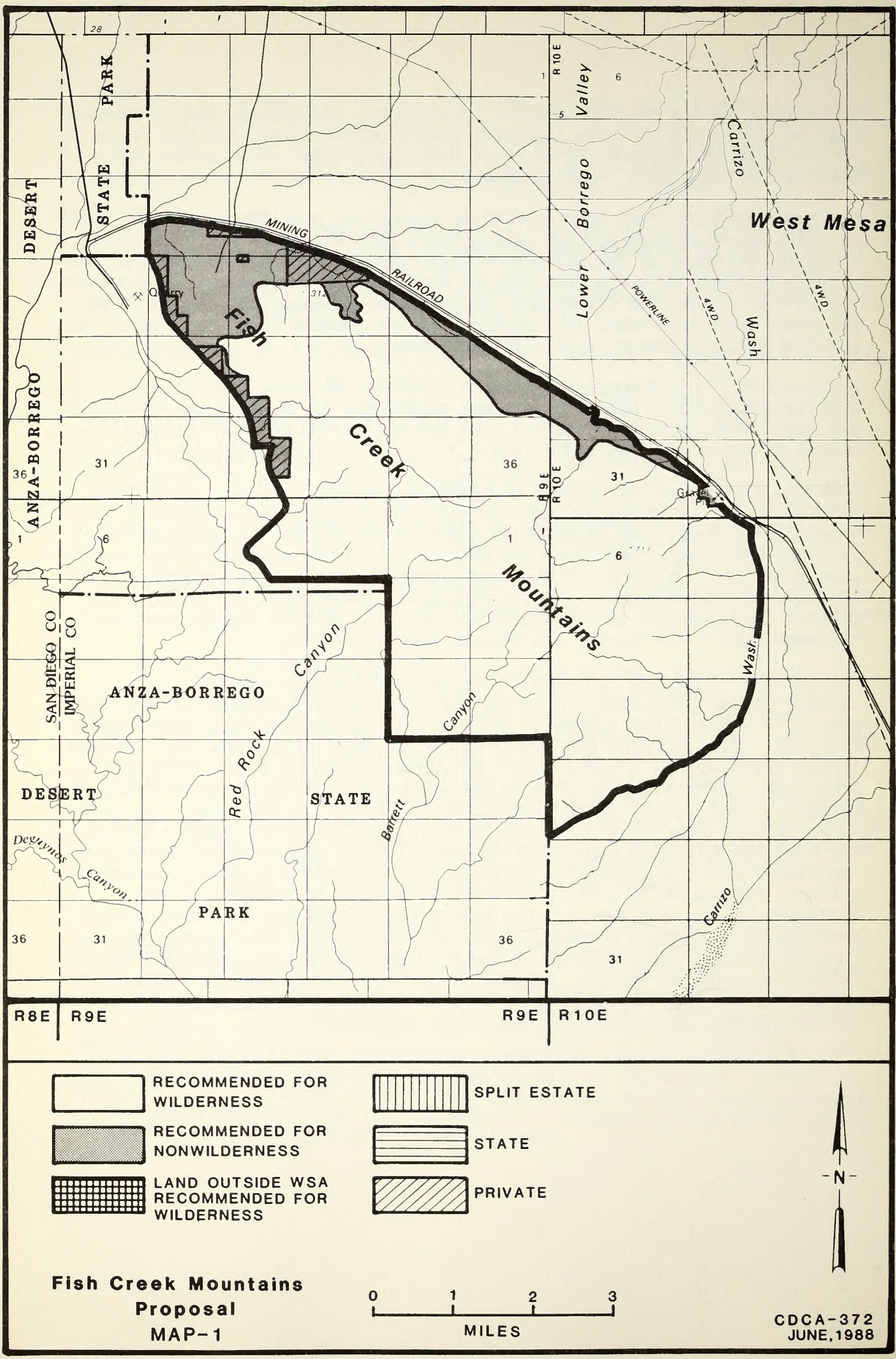
In addition to its pristine natural environment, the recommended wilderness portion of the WSA contains important archeological sites eligible for inclusion on the National Register of Historic Places. Wilderness designation would help assure preservation of these sites.

The proposed Fish Creek Mountains Wilderness would compliment adjacent units of the designated Anza-Borrego Desert State Park Wilderness. The adjacent or nearby portions of the State Park Wilderness include the lowlands of the Carrizo Badlands to the south, and the highlands of the Vallecito Mountains to the west. The Fish Creeks are intermediate in elevation between these two State Park districts, and represent an environment which is related to, but distinctly different from either of them.

Designation of the proposed wilderness would not displace traditional motorized recreation use. The extreme ruggedness of the area has generally precluded penetration by vehicles, and the entire WSA has been officially closed to motor vehicles since 1974.

When the preliminary wilderness recommendations were developed as part of the CDCA Plan, an effort was made to exclude the area of high gypsum potential from the area recommended suitable for wilderness designation. However, the mineral resource data had not been fully analyzed prior to the recommendation. Portions of the area judged to have a high potential for gypsum were inadvertently included within the recommended wilderness. Details are presented in the succeeding sections of this report entitled "Manageability" and "Energy and Mineral Resource Values."

The portion of the WSA recommended for nonwilderness is located on the fringes of the study area. A narrow strip is situated between the northern base of the Fish Creek Mountains and the U.S. Gypsum Company's narrow gauge railroad. This creosote bush covered area is relatively flat, and includes the alluvial fans of several major drainages. Although these lands have been closed to off-highway vehicle use since 1974, enforcement is difficult because of the ease of cross country vehicle travel in the area. Consequently, this strip is criss-crossed with off-highway vehicle trails. The alluvial fans also contain flood control dikes and drainage channels associated with the railroad. Shifting drainage patterns may well require periodic relocation of these structures within the nonsuitable lands. Exclusion of this acreage from the wilderness recommendation places the recommended wilderness boundary along natural barriers which preclude further access. The remainder of the area recommended for nonwilderness is on the west side of the WSA, adjacent to U.S. Gypsum Company's quarry. This portion of the WSA was believed to contain considerable gypsum reserves when the preliminary wilderness recommendation was developed.


ANZA-BORREGO DESERT STATE PARK
West Mesa
Lower Borrego Valley
Carrizo Wash
MINING RAILROAD
POWERLINE
4WD
Fish Creek Mountains
Red Rock Canyon
Barrett Canyon
Deguynos Canyon
Quarry
Gravel Pit
SAN DIEGO CO
IMPERIAL CO
T13S
T14S
R8E
R9E
R10E
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0 1 2 3
MILES

Fish Creek Mountains Proposal

MAP-1

CDCA-372
JUNE, 1988

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	17,626
Split Estate	(BLM surface only)	0
Inholdings		
State		40
Private		1,138
Total		18,804
Within the Recommended Wilderness Boundary		**Acres**
BLM	(within WSA)	15,466
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		15,466
Inholdings		
State		0
Private		0
Within the Area Not Recommended for Wilderness		**Acres**
BLM	(surface and subsurface)	2,160
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		2,160

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The portion of the WSA recommended for wilderness is essentially untrammeled by man. The only signs of man are aboriginal fish weirs, an abandoned prospector trail, and a few abandoned shallow prospect holes. All of these man-made features are substantially unnoticeable within the WSA. Lands recommended for nonwilderness contain more human intrusions, including off-highway vehicle trails and railroad flood control structures.

2. Solitude: Within the portion of the WSA recommended for wilderness, the opportunities for solitude are many. The challenging hike into the mountains serves to limit use, enhancing opportunities for solitude. Many peaks, canyons, and hanging valleys in the Fish Creek Mountain high country remain virtually unexplored, wilderness in the true sense. The rugged topography serves to shield users from one another, also enhancing the feeling of solitude.

   Opportunities for solitude are further reduced in the portion of the WSA recommended for nonwilderness, because of its mostly flat topography, lack of remoteness, and on the northwest side, its closeness to the large gypsum quarry.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: The area recommended for wilderness has high potential for primitive forms of recreation (i.e., hiking and backpacking), because of the large spaces involved and the natural screening of the topography. Little of this potential has been realized; the WSA currently receives very low recreational visitation. Lack of recreational use can be attributed to the following factors: a low level of public awareness of recreational opportunities within the WSA, the formidable appearance of the steep northern slope of the Fish Creeks, and the fact that access up the more gentle south slope is blocked by the Carrizo Impact Area, a portion of Anza-Borrego Desert State Park formerly used for military weapons practice and now closed to public use. In spite of these limiting factors, or perhaps because of them, primitive recreational opportunities await the person looking for a wilderness experience.

   The quality of primitive recreation experiences available on the nonsuitable portions of the WSA has been reduced by the obvious signs of motorized activity along the base of the mountains, and the sights and sounds of the quarry operation.

4. Special Features: The steep slopes of the WSA contain limestone outcrops which are more resistant to erosion than the surrounding granitic rocks. As a result, running water from periodic cloudbursts has created narrow, steep chutes at points where canyons cut through the limestone. At the base of some of these, the swirling action of water surging through the chutes has created smooth sided basins. Shielded from the evaporative power of the sun

by the steep walls of the chute, water in these natural tanks or tinajas typically remains year round (though it is not suitable for human consumption). The limestone chutes are unique within the CDCA.

No Federally listed threatened or endangered plant or animal species or candidates for threatened or endangered listing are positively known to occur in this area. Data on the actual occurrence of sensitive plant and wildlife species within the WSA is lacking, largely because difficulty of access has severely limited scientific investigation.

Two plants of management concern have been found on nearby Split Mountain. These two species, Malperia tenuis, considered rare in California but common elsewhere by the California Native Plant Society (CNPS), and Xylorhiza orcuttii, considered rare and endangered by CNPS, may also be found within the Fish Creek Mountains WSA. Since the WSA has not been inventoried for sensitive plants, it is possible that other plants of management concern grow there.

The rugged, isolated landscape of the WSA has produced habitat favorable for a number of sensitive wildlife species. The Fish Creeks are within the range of the peninsular bighorn sheep, listed as rare by the State of California. Although the rugged topography of the WSA is ideal for this species, its numbers are no doubt severely limited by the lack of available water. The WSA is also within the range of the barefoot gecko, Anarbylis switaki, a species common several hundred miles to the south in Baja California, but of very limited distribution in California. This species lives under "cap rocks," which are thin layers of exfoliating granite which are common on boulders in the Fish Creeks. The species is listed as rare by the State of California. The WSA provides excellent cliff habitat for falcons, golden eagles, and other birds of prey. Prairie falcon nests have been observed in cliffs near some of the limestone chute areas. Observations of other more sensitive species are lacking, but it is likely that golden eagles and species on the Audubon Society's "Blue List" of declining species occur within the WSA.

The WSA contains a portion of the shoreline of ancient Lake Cahuilla, which exhibits important evidence of prehistoric human occupation. Lake Cahuilla was a great body of freshwater which covered the Imperial and Coachella Valleys on several occasions during the last 50,000 years, and which last receded about 500 years ago. The ancient shoreline was an important seasonal camping area for Native Americans who utilized the abundant aquatic life of the lake for food. Just inside the portion of the WSA recommended for wilderness, at the base of the northeast slope of the Fish Creeks, are row upon row of stone rings thought by archaeologists to be aboriginal fish traps or weirs. Fish traps at different levels on the slopes reflect fluctuations in the level of Lake Cahuilla. Some of the fish traps are thought to be as much as 2,500 years old. BLM archaeologists consider the portion of shoreline within the WSA to be eligible for inclusion on the National Register of Historic Places. The Fish Creek Mountains WSA is the only WSA in the California Desert Conservation Area to contain an example of the ancient Lake Cahuilla shoreline and associated cultural resources.

B. Diversity in the National Wilderness Preservation System

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 17,626 acres of the American Desert/Creosote Bush-bur sage (*Larrea-Franseria*) ecosystem. The general ecosystem of the Fish Creek Mountains WSA is represented in other areas either already designated or recommended for wilderness designation. However, this WSA and the nearby Jacumba Mountains WSA are the only two areas either designated or under consideration for wilderness containing habitat for the barefoot gecko, which occurs north of the Mexican border only in this immediate area.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas		Other BLM Studies	
	areas	acres	areas	acres
	NATIONWIDE			
American Desert/Creosote Bush-Bur Sage	3	126,033	48	1,554,440
	CALIFORNIA			
American Desert/Creosote Bush-Bur Sage	2	26,472	20	959,979

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is only two hours from San Diego, and would thus contribute significantly to the wilderness opportunities available to the residents of that growing metropolitan area. The WSA is within a five-hour drive of a total of five major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a five-hour drive of the population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS areas areas	 acres	Other BLM Studies areas	 acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Oxnard-Ventura	23	2,195,198	85	2,703,260
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814

3. Balancing the geographic distribution of wilderness areas: The closest designated area is the Anza-Borrego Desert State Wilderness, within two miles of the recommended wilderness portion of the Fish Creek Mountains WSA. Four other designated wildernesses are within 50 air miles: Santa Rosa, Hauser, and Pine Creek, administered by the U.S. Forest Service, and Cuyamaca Mountains State Wilderness Area. Seven BLM study areas recommended for wilderness designation are also within 50 air miles.

C. Manageability

With the exception of the area of high gypsum potential, the Fish Creek Mountains WSA is manageable as wilderness. Extracting the gypsum resources would cause essentially the total loss of wilderness values on about 800 acres which are presently proposed for wilderness designation. The gypsum deposits in the recommended wilderness area are encumbered by 20 unpatented placer mining claims, 18 of which are held by U.S. Gypsum Company, which operates a nearby open pit gypsum mine. The company has submitted a patent application on eight of their claims.

Except for the area of gypsum reserves, the recommended wilderness area is easily manageable as wilderness. The boundaries of the recommended wilderness area follow very rough terrain that forms a natural barrier to nonprimitive forms of recreation and to the use of mechanical equipment. The boundaries can be readily identified in the field. No other conflicting uses exist that would endanger the wilderness resources.

In contrast, as mentioned earlier in this report, the portion of the WSA recommended for nonwilderness is subject to additional uses that conflict with wilderness values. The recommended nonwilderness portion contains flood control dikes and drainage channels which may need to be periodically relocated in response to shifting drainage patterns. In addition, much of the area is vulnerable to OHV trespass because of flat topography.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: Prior to publication of the CDCA Plan, BLM prepared a Geology- Energy-Mineral (G-E-M) Report for the Yuha Basin G-E-M Resource Area (GRA), of which the WSA is a part. However, the CDCA Plan did not fully analyze and interpret the Yuha Basin GRA Report as it specifically relates to the Fish Creek Mountains WSA. The GRA Report indicates an area along the northwestern boundary of the WSA as having a high potential for the occurrence of gypsum, as shown on Map 2, based on known outcrops of gypsum in the area. The GRA Report also shows the WSA has potential for geothermal energy. (The Yuha Basin GRA Report is a BLM administrative report available in the California Desert District G-E-M resource files). Two unpatented mining claims were known to be recorded with BLM as of December 12, 1979.

   In January 1979, the U.S. Geological Survey (USGS) classified the north half and southeast quarter of the WSA as a Potential Geothermal Resource Area (PGRA). As shown on Map 2, the PGRA is classified as moderate potential for the occurrence of geothermal resources using the BLM classification scheme.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Recommendation: Between 1983 and 1985, the USGS and the U.S. Bureau of Mines (BOM) conducted mineral surveys of the recommended wilderness portion of the WSA. BOM released the report of their activity in 1986 (MLA 23-86). The results of these surveys were published in 1987 in USGS Bulletin 1711-C. The bulletin states that the U.S. Gypsum Company holds 18 unpatented mining claims in Tertiary sedimentary rocks along the northwestern boundary of the recommended wilderness portion of the WSA. These claims are estimated to contain approximately 20 million tons of gypsum based upon surface outcrops and drill hole data. As shown on Map 2, this area was classified by USGS and BOM as exhibiting high potential for gypsum and coincides with the area classified in BLM's 1980 GRA Report.

   An area in the central portion of the WSA containing Paleozoic metasedimentary rocks was classified by USGS and BOM as having a high potential for the occurrence of limestone, as shown on Map 2, based on numerous limestone outcrops and favorable geology. The USGS Bulletin identifies an area in the central portion of the WSA as a shear zone containing skarn deposits, and classifies the area as having low potential for lead, molybdenum, and tungsten. Based on the occurrence of these metals and favorable geologic environment identified in the bulletin, this area has been identified on Map 2 as having a moderate potential for the occurrence of these metals using the BLM classification scheme.

Sand and gravel in alluvial fan and ancient shoreline deposits identified in the bulletin along the northeast and eastern boundaries of the WSA, and also described in California Division of Mines and Geology (CDMG) County Report #7, have been classified on Map 2 as having a moderate potential for occurrence using the BLM classification scheme. This potential rating is based on production of sand and gravel outside the WSA during the 1960s and favorable geologic environment. Neither the CDMG report nor the USGS bulletin identifies production volumes.

In April 1987, the U.S. Gypsum Company submitted an application to patent eight placer mining claims in the northwestern portion of the WSA recommended for wilderness. In November 1987, a second patent application for their ten remaining claims was being prepared, but not yet submitted.

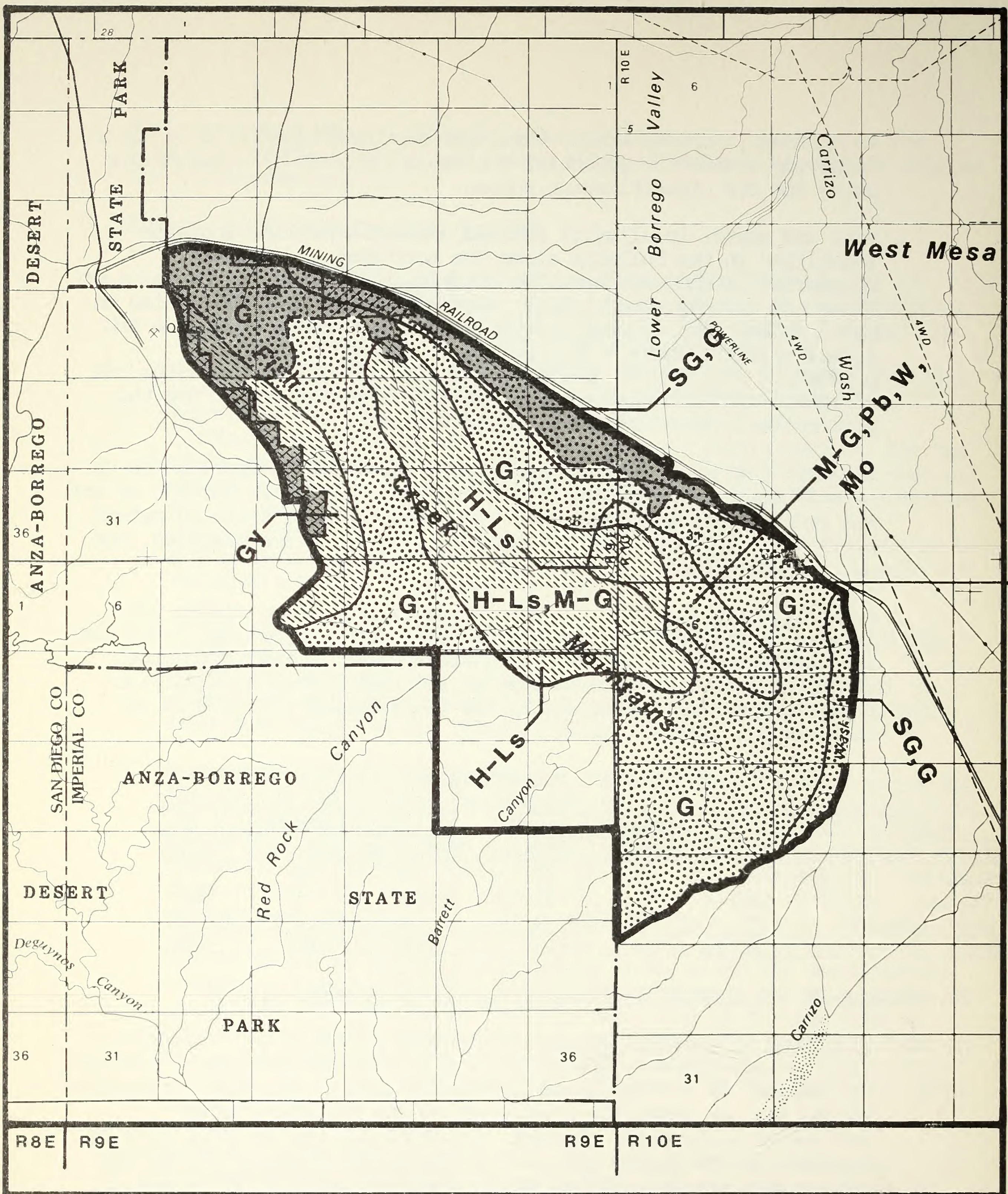
As of December 31, 1987, 20 unpatented placer mining claims were located in the recommended suitable northwestern portion of the WSA. Two unpatented lode mining claims are located in the recommended nonsuitable northwestern portion of the WSA. Table 4 summarizes unpatented mining claims within the WSA recorded with BLM as of December 31, 1987.

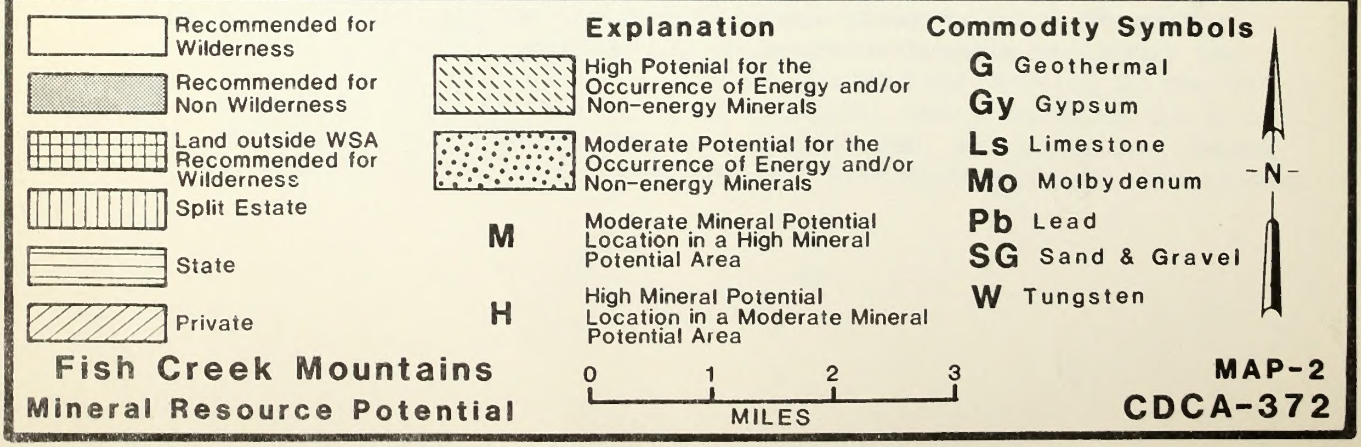
Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	0	2	2	0	40	40
Placer	20	0	20	800	0	800
Mill Site	1	0	1	5	0	5
Total	21	2	23	805	40	845

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Wilderness values will be eventually lost on approximately 800 acres of the proposed wilderness, through development of mining claims containing gypsum reserves. Wilderness values will be generally maintained on the remaining acres designated wilderness, although opportunities for solitude will be foregone on the slopes overlooking the gypsum claims. Wilderness values will remain marginal on the fourteen percent of the WSA to remain nonwilderness, and will continue to gradually decline as a result of mineral development and OHV use.


DESERT
STATE
PARK
ANZA-BORREGO
MINING
RAILROAD
R 10 E
Lower Borrego Valley
Carrizo
Wash
West Mesa
POWERLINE
4WD
4WD
SG, G
M-G, Pb, W, Mo
G
Fish Creek
H-Ls
H-Ls, M-G
Mountains
Gy
H-Ls
SG, G
Wash
T13S
T14S
SAN DIEGO CO
IMPERIAL CO
ANZA-BORREGO
DESERT
STATE
PARK
Red Rock Canyon
Canyon
Barrett
Deguynos Canyon
Carrizo
R8E
R9E
R9E
R10E


Recommended for Wilderness
Recommended for Non Wilderness
Land outside WSA Recommended for Wilderness
Split Estate
State
Private
Explanation
High Potenial for the Occurrence of Energy and/or Non-energy Minerals
Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M Moderate Mineral Potential Location in a High Mineral Potential Area
H High Mineral Potential Location in a Moderate Mineral Potential Area
Commodity Symbols
G Geothermal
Gy Gypsum
Ls Limestone
Mo Molbydenum
Pb Lead
SG Sand & Gravel
W Tungsten
N
0 1 2 3
MILES

Fish Creek Mountains

Mineral Resource Potential

MAP-2

CDCA-372

2. Impact on Mineral Exploration and Development: Eighty-six percent of the WSA will be withdrawn from mineral entry, precluding further exploration. Development of existing unpatented claims in this area can occur subject to proof of a valid discovery. Fourteen percent of the WSA, containing two unpatented claims, will be unaffected by the proposed action.

3. Impact on Geothermal Exploration and Development: The proposed action will make development of potential resources unfeasible on the portion of the WSA to be designated wilderness. Approximately 84% of the proposed wilderness has a moderate potential for geothermal resources. However, the area of moderate potential also includes the entire portion of the WSA to remain nonwilderness. Opportunities for geothermal exploration and development will be unaffected in the nonwilderness portion.

4. Impact on Cultural Resources: The important archeological resources associated with the ancient Lake Cahuilla shoreline will be protected by wilderness designation, which will eliminate the possibility of future surface disturbing activities. These resources are located outside the area of high gypsum potential containing the mining claims.

5. Impact on Sensitive Plant and Wildlife Species: Although data on sensitive species is lacking for this WSA, all proposed surface disturbing activities on public lands will be subjected to a thorough environmental analysis to collect baseline data and develop mitigation measures to hold potential adverse impacts to low levels.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Known inaccuracies and explanations deemed useful to the reader are noted in parentheses.

1. Inventory Phase: Most comments favored inclusion of the area for further wilderness study. Many also urged expansion of the study area southward based on natural character and high ecological values, especially in Carrizo Wash. (Field checks revealed manmade features which detracted from the area's natural character.) Some comments pointed out the presence of mining and roads, which were excluded after field verification.

2. Study Phase: Of the 80 comments received, a heavy majority favored wilderness designation. The most common reason for supporting designation was the protection this wilderness area would give to wilderness lands in Anza-Borrego Desert State Park. To this end, many respondents recommended adding Carrizo Wash to the WSA because of its importance as a drainage system and a wildlife habitat. Other suggestions for expansion included: extending the southern portion to include the strip between the gunnery range and the park; acquisition and management of the gunnery range as wilderness; extending the wilderness area to the northwest to protect the border of the park, but excluding the gypsum operation; extending the area to the south to make WSAs 372 and 373 a single area; extending the area south to Coyote Wash; and transferring ownership of both WSAs 372 and 373 to the State for park expansion. It was acknowledged that most of the areas suggested for expansion were damaged by vehicle use and mining, but respondents argued that rehabilitation was feasible within a reasonable time.

   Among the values of the area cited by supporters of wilderness designation were the following: bighorn sheep habitat; scenic floral displays; vistas of the Yuha Desert, Mexico, and the Coachella and Imperial Valleys; highly scenic and scientifically important geology; archeological values, including trails and sleeping circles; watersheds; and rare plants and wildlife, including the black rail, Orcutt's aster, and Thurber's pilostyles. Recreational opportunities said to be popular here were hiking, photography, nature study, and backpacking. The following features were thought by some respondents to detract from wilderness quality: U.S. Naval gunnery range activities, cited as noisy and dangerous for recreationists, night lights of cities, aircraft flyovers, mining scars, noise of mining operations, and railroad visibility and noise.

   Respondents opposing wilderness designation included recreationists who felt motor vehicle access was necessary for family camping. They pointed out that the WSA is accessible to metropolitan areas. Besides citing mining scars, some believed that vehicle access was necessary to continue exploration for mineral resources, including gypsum. The area was said to have potential for oil and gas and geothermal development, which might have spinoff benefits for the agricultural economy of Imperial Valley by providing a heat source for food processing. The Imperial County Department of Parks and Recreation noted that closing the WSA to vehicles would block a transmission route which had been proposed by the Imperial County Transmission Route Selection Committee.

   Several comments were received in response to the Public Input Workbook of 03/15/79. The majority of the comments favored wilderness designation and expanded boundaries. One respondent favored maintaining high motorized vehicle use, (the area had been closed to vehicles since 1974) with no hikers in the area.

3. Draft Plan Alternatives: The National Outdoor Coalition, a coalition of mining, rockhounding, and OHV groups, recommended that a portion of the WSA be designated wilderness, with the remainder managed for moderate intensity multiple uses. (Their map was small and did not provide well defined boundaries). The Sierra Club and other conservation organizations favored wilderness designation for the entire WSA. Members of these organizations mailed in thousands of coupons supporting their respective positions. The Imperial County Planning Department requested that the area be designated for moderate intensity multiple use management to conform to the County General Plan, which calls for recreation and residences in this location.

4. Proposed Plan: Comments were essentially the same as those received during the draft plan stage for this WSA.

Coyote Mountains

CDCA 373

COYOTE MOUNTAINS WILDERNESS STUDY AREA (WSA)

(CDCA-373)

1. THE STUDY AREA --- 10,954 acres

The Coyote Mountains WSA is located at the western edge of Imperial County, in the southwest corner of the California Desert Conservation Area (CDCA), about 35 miles west of El Centro. The 10,954 acre study area consists exclusively of public land administered by the BLM (see Map 1 and Table 1).

The nearest paved road is Imperial Highway (S2) which passes within two miles of the WSA, and from which the south boundary can be reached via several primitive routes usually negotiable by high clearance, two-wheel drive vehicles. On the north and west the WSA abuts Anza-Borrego Desert State Park. To the south and east are primarily multiple use public lands where mining, sand and gravel extraction, and off-highway vehicle (OHV) based recreation have been the major activities. The WSA's irregular south and east boundaries resulted from the need to exclude these areas of obvious human activity.

The Coyote Mountains themselves comprise approximately the southern 40% of the WSA. A compact, fish hook shaped range, the Coyotes extend westward into Anza-Borrego Desert State Park and northeastward onto adjacent public land. Typical of Colorado Desert mountains, the rock strewn slopes of the Coyotes are covered primarily with creosote bush scrub, which begins to give way to semi-succulent scrub at higher elevations. A portion of the Carrizo Badlands makes up the northern 60% of the WSA. Sparsely vegetated and cut by myriad narrow, twisting gullies, this part of the WSA has the austere, forbidding landscape characteristic of badlands.

On the crest of the Coyote Mountains in the south-central part of the study area are a group of unusual sandstone rock formations, associated marine plant and invertebrate animal fossils, and occasional vertebrate fossils. In 1980, as part of the CDCA Plan, BLM designated the 640 acre Coyote Mountains Fossil Site Area of Critical Environmental Concern (ACEC) to protect these unique paleontological resources. An ACEC management plan was completed in 1987.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statements (EISs) for the CDCA Plan: protection, use, balanced, and no action; a summary of the area's wilderness values was included in Appendix III of the Final EIS.

2. RECOMMENDATION AND RATIONALE ---

0	acres recommended for wilderness
10,954	BLM acres recommended for nonwilderness

No wilderness is the recommendation for the Coyote Mountains WSA. The entire acreage in this WSA is released for uses other than wilderness. Management efforts will be guided by the Coyote Mountains Fossil Site Area of Critical Environmental Concern and the Coyote Mountains Wildlife Habitat Area Management Plan. Protection will be afforded for biological, cultural, and paleontological resources, while allowing mineral development to potentially occur. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The no wilderness recommendation is based on the following rationale: (1) the WSA is similar to adjacent State wilderness and nearby BLM WSAs recommended for wilderness, and its addition to the National Wilderness Preservation System would be repetitive; (2) significant paleontological resources would be less accessible for scientific research if the area were designated wilderness; and (3) a portion of the WSA has high potential for limestone, clay, and gypsum, as well as an interest in these resources as evidenced by the number of mining claims on record.

The landforms and ecosystem typified by the Coyote Mountains WSA are already well represented in other areas identified for wilderness preservation. The Carrizo Badlands, which constitute about 60% of the WSA, extend northwestward into Anza-Borrego Desert State Park where approximately 25,000 acres have been included in a State designated wilderness area. An additional example of badlands is contained in BLM's Mecca Hills WSA, located about 50 miles due north. About 70% of the Mecca Hills' acreage is recommended for wilderness designation. The Coyote Mountain range which constitutes 40% of the Coyote Mountains WSA is, overall, a typical representative sample of Colorado Desert mountains. Two larger BLM study areas recommended for wilderness, the Fish Creek Mountains (CDCA-372) and the Jacumba Mountains (CDCA-368), are located a mere five miles due north and south of this study area, respectively, and contain adequate examples of similar mountainous terrain. Because the Coyote Mountains WSA is very similar to these other areas when considered as a whole, little would be gained from its addition to the National Wilderness Preservation System.

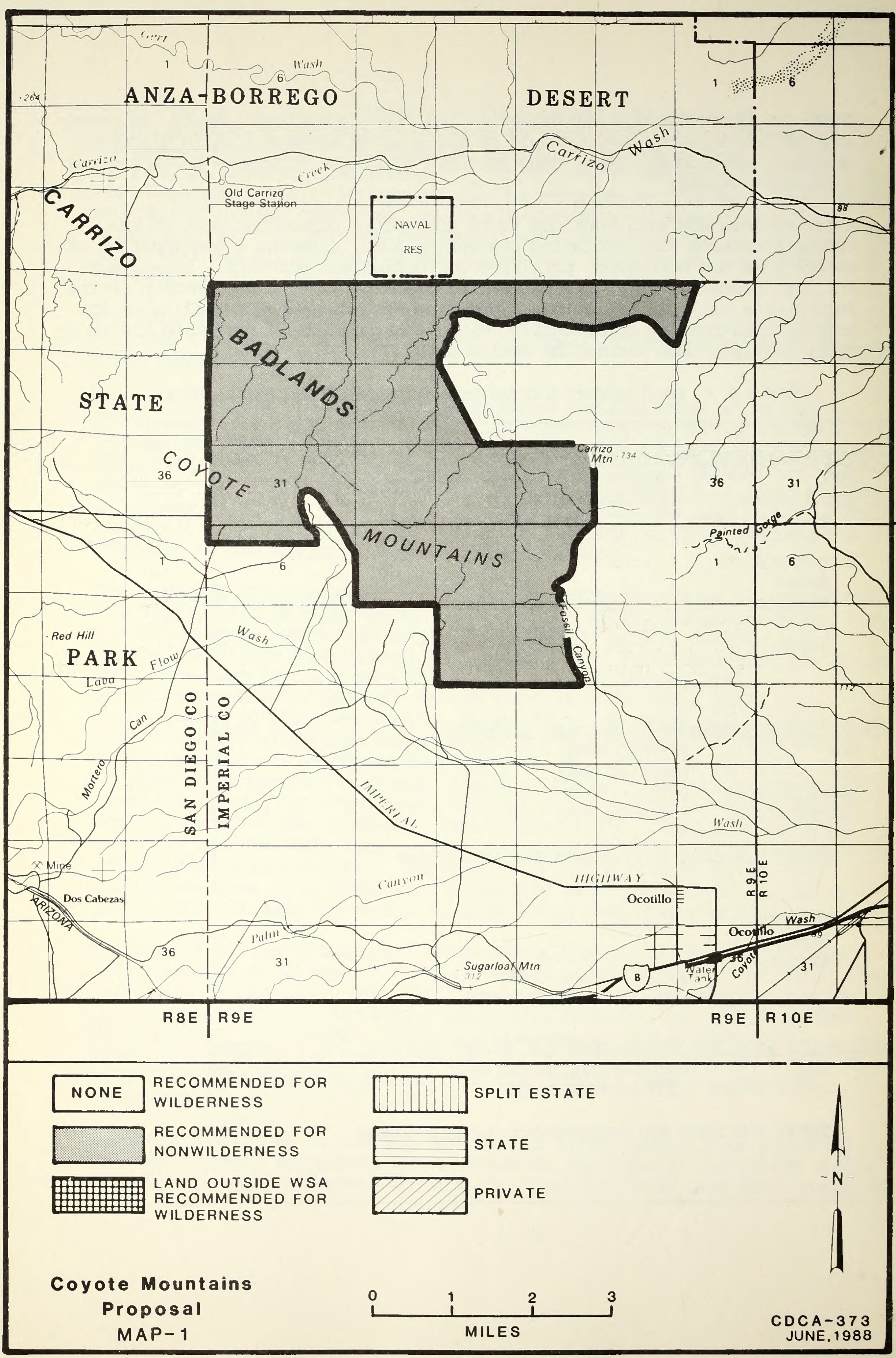
The significant paleontological resources of the Coyote Mountains can be better managed as an Area of Critical Environmental Concern (ACEC) than they could be as wilderness. Under ACEC management prescriptions, the fossils will be accessible for legitimate scientific research, yet protected from indiscriminate collection. Wilderness designation could constrain scientific research and thereby hamper the contribution this area could make to the body of scientific knowledge on the Pliocene Epoch in southern California.

The southeast corner of the WSA, portions of which exhibit high potential for clay, gypsum, and cement grade limestone, contains 46 unpatented mining claims. Although wilderness designation could constrain full development of these resources through withdrawal of the area from mineral entry, at least some of the existing claims would probably prove to have a valid discovery, and their development would constrain BLM's ability to ensure protection of wilderness values.

Motor vehicle use will continue to be prohibited throughout most of the Coyote Mountains WSA, including the entire ACEC, allowing a continuation of established non motorized, primitive recreation use patterns. Management for low-intensity, carefully controlled use with an ACEC designation on the fossil site will protect this WSA's unique features and the quality of the primitive recreation opportunities without categorically rejecting mining or other multiple uses within the entire area.

TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area		Acres
BLM	(surface and subsurface)	10,954
Split Estate	(BLM surface only)	0
Inholdings		
State		0
Private		0
Total		10,954
Within the Recommended Wilderness Boundary		**Acres**
BLM	(within WSA)	0
BLM	(outside WSA)	0
Split Estate	(within WSA)	0
Split Estate	(outside WSA)	0
Total BLM Land Recommended for Wilderness		0
Inholdings		
State		0
Private		0
Within the Area Not Recommended for Wilderness		**Acres**
BLM	(surface and subsurface)	10,954
Split Estate	(BLM surface only)	0
Total BLM Land Not Recommended for Wilderness		10,954


ANZA-BORREGO DESERT STATE PARK
CARRIZO BADLANDS
COYOTE MOUNTAINS
Gert Wash
Carrizo Creek
Carrizo Wash
Old Carrizo Stage Station
NAVAL RES
Carrizo Mtn 734
Painted Gorge
Fossil Canyon
Red Hill
Lava Flow
Wash
Mortero Can
SAN DIEGO CO
IMPERIAL CO
IMPERIAL HIGHWAY
Mine
Dos Cabezas
ARIZONA
Canyon
Palm
Sugarloaf Mtn 312
Ocotillo
Water Tank
Coyote Wash
8
88
112
264
1
6
36
31
T15S
T16S
R8E
R9E
R10E
NONE
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES

Coyote Mountains Proposal
MAP-1

CDCA-373
JUNE, 1988

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: Overall, the Coyote Mountains WSA has retained its primeval character and influence; although minor, site specific negative impacts to naturalness have occurred. A few primitive ways and several small mining prospects with minor surface disturbance constitute the most lasting signs of human activity. Some of the unusual dome shaped rock formations have been defaced by graffiti inscriptions and by campfire building inside natural hollows in the domes. All of these human alterations to the natural environment are substantially unnoticeable.

2. Solitude: Opportunities for solitude vary depending on location. Most visitor use is concentrated at the dome formations and associated fossil sites in the south central portion of the WSA, and along the trail which leads there from the area's south boundary. Use takes place predominantly on winter weekends; it is unusual to encounter another person there on a weekday. The north half of the WSA is a seldom visited, trailless badlands, where the topography further screens visitors from each other.

   This WSA is periodically overflown by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: The area offers opportunities for hiking, backpacking, rockhounding, nature study, and nature photography. The domes are one of the more popular overnight backpack destinations on BLM land in the El Centro Resource Area. There are limited opportunities for deer and quail hunting. The absence of a permanent water source, extreme summer temperatures, and highly dissected topography with few trails offer challenges or pose limitations to recreation, depending on an individual's point of view.

4. Special Features: The WSA's major special features are the fossils and associated sandstone formations in the ACEC. The fossils are remnants of a shallow inland sea that covered most of Imperial and central Riverside Counties six million years ago during the Pliocene Epoch. Within the WSA, the fossils are predominantly shellfish, closely related to present day forms of bivalves (oysters and clams) and echinoderms (sand dollars). Pliocene invertebrate fossil deposits are rare, and this site is exceptional both for their abundance and state of preservation. It is a research site visited by both students and professional paleontologists and is of

scientific interest because an entire fossil ecosystem may be readily studied. Vertebrate fossils such as whale bones were also recently discovered in the WSA.

An unusual petroglyph was discovered within the WSA in 1985, consisting of a series of pits and grooves etched into a vertical sandstone face. This style of petroglyph has not been previously reported in the United States, although similar motifs occur in Baja California. Additional examples possibly occur elsewhere in the WSA because vertical sandstone surfaces are abundant; however, extensive inventories have not been conducted. Several transects were examined within the WSA in preparation for the CDCA Plan, which encountered only a single chipping station (stone tool manufacturing site) not considered noteworthy. The probability of encountering extensive archeological sites within the WSA is considered low, because the area appears to lack sufficient economic resources to have attracted past human use or occupation.

Although the biological communities of the WSA are representative of several which occur throughout the Colorado Desert, the area contains a few plant and animal species of special interest. Seven square miles encompassing the mountain ridges are known range of the barefoot gecko. This reptile is listed as rare by the State of California, and is under status review by the U.S. Fish and Wildlife Service (USF&WS). Although field checks have not been conducted, rock nettle (Eucnide rupestris) probably occurs within the WSA, based on its known presence in nearby Painted Gorge. This plant is classified by the California Native Plant Society as "rare or endangered in California, but more common elsewhere." Rock nettle is not listed as threatened or endangered by the USF&WS, nor is it under status review by that agency.

B. Diversity in the National Wilderness Preservation System (NWPS)

1. Assessing the diversity of natural systems and features as represented by ecosystems: The WSA contains 10,954 acres of the American Desert/Creosote Bush-Bur Sage (Larrea-Franseria) ecosystem, an ecosystem that is already well represented by other, larger areas recommended for wilderness designation. Although the area does contain some significant special features, wilderness designation of the Coyote Mountains WSA would not increase the ecological diversity of the NWPS.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification Domain/Province/PNV	NWPS Areas		Other BLM Studies	
	areas	acres	areas	acres
	NATIONWIDE			
American Desert/Creosote Bush-Bur Sage	3	126,033	48	1,561,111
	CALIFORNIA			
American Desert/Creosote Bush-Bur Sage	2	26,472	20	966,650

2. Expanding the opportunities for solitude or primitive recreation within a days driving time (five hours) of major population centers: The WSA is within a five-hour drive of five major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a five-hour drive of the population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

Population Centers	NWPS areas		Other BLM Studies	
	areas	acres	areas	acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,616
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Oxnard-Ventura	23	2,195,198	85	2,703,260
Riverside-San Bernardino	22	2,031,054	205	7,658,649
San Diego	15	1,043,680	100	3,378,814

3. Balancing the geographic distribution of wilderness areas: The Coyote Mountains WSA is within 50 air miles of eight BLM WSAs recommended for wilderness designation. Two of these are only five miles from the study area. The closest designated wilderness is the adjacent Anza-Borrego Desert State Wilderness. Less than 50 air miles west are three other wilderness areas: Cuyamaca Mountains State Wilderness, and the Hauser and Pine Creek Wilderness Areas administered by the Cleveland National Forest.

C. Manageability

The WSA is manageable as wilderness. The only vehicle route leading into the area was closed in 1974, in order to protect the fossil deposits. On the north and west, the WSA borders Anza-Borrego Desert State Park where vehicle use is carefully controlled. The south and east boundaries, although they abut public lands having an extensive system of primitive ways, are in rugged terrain where recreational off-highway vehicle use has been light. Incidents of motor vehicle trespass into the WSA are infrequent.

Mineral development could make it impossible to maintain the WSA's wilderness values in their present condition. If some of the 46 unpatented mining claims within the WSA were found to be valid, their development would result in a loss of both naturalness and solitude in the southeast portion of the WSA.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of Information Known at the Time of the Preliminary Suitability Recommendation: Prior to publication of the CDCA Plan, BLM prepared a Geology-Energy-Mineral (G-E-M) Report for the Yuha Basin G-E-M Resource Area (GRA), of which the WSA is a part. Although the CDCA Plan did not fully analyze and interpret the Yuha Basin GRA Report as it specifically relates to this WSA, it did identify some resource potentials. The EIS for the CDCA Plan indicates possible potential for copper, gypsum, and limestone in the southeast portion; geothermal energy in the southwest; and oil and gas in the entire WSA. Public comments submitted on the EIS indicates that the WSA is an excellent producer of jewelry grade marble, glass sand, obsidian, and other minerals.

   The GRA Report indicates that gypsum had been mined in the far southeastern and northeastern portions of the WSA. Copper was recovered from the southwestern corner, and cement grade limestone had been mined in the southern part of the WSA. The eastern portion of the WSA was classified as prospectively valuable for geothermal resources by the U.S. Geological Survey (USGS) in 1978.

2. Summary of Significant New Mineral Resource Data Collected Since the Preliminary Suitability Recommendation Which Should be Considered in the Final Decision: There was no joint USGS/U.S. Bureau of Mines mineral survey conducted for this WSA because it is recommended nonsuitable for wilderness designation. However, the 1973 California Division of Mines and Geology (CDMG) County Report No. 3, Geology and mineral resources of Imperial County, describes the mining activity recorded for the period of 1925 to 1977.

New data not available during the development of the CDCA Plan upgraded the quality of the mineral data regarding the WSA. Map 2 reflects the mineral resource potential of the WSA based on this new data.

A 1981 BLM GRA Report evaluates the mineral resource potential of the Yuha Basin GRA based on data from the CDMG report. The report states that in the northeastern portions of the WSA sulfur and gypsum have been mined, and in the north-central portion, manganese, sulfur, and gypsum were mined. However no production figures are available. In the 1950s and 1960s, 1,000 tons of gypsum and 100 tons of tungsten ore were recovered from the eastern portion of the WSA. In the southern portion of the WSA, 1,200 tons of silica, 1,000 tons of cement grade limestone, 50 tons of ceramic clay, and an unknown amount of gypsum were recovered. This activity occurred from the 1940s to the 1960s. Those areas with past production of metal and nonmetal resources are considered under the BLM mineral potential classification process as having a high potential for the occurrence of these resources (See Map 2).

Nickel and copper occurrences were reported in the southeastern portion of the WSA, but no production was recorded. An undetermined quantity of mica rich roofing granules were reportedly mined in the eastern portion of the WSA. Those areas with no recorded past production of metal and nonmetal resources, but with reported occurrences and favorable geologic environment, are considered under the BLM mineral potential classification process as having a moderate potential for the occurrence of these resources and are also shown on Map 2.

BLM has classified the southeast portion of the WSA as potentially valuable for geothermal resources, and the north half and southeastern portions of the WSA as potentially valuable for oil and gas resources. Due to lack of evidence for oil and gas sources (or shows), and geothermal hot springs, those areas classified potentially valuable are considered under the BLM mineral classification system as having a low potential for the occurrence of these resources.

The entire WSA was covered by oil and gas leases in 1980; however, these all terminated without any development having taken place. No oil and gas or geothermal leases are presently located in the WSA. By Congressional mandate, BLM has maintained a moratorium on leasing in WSAs since 1983. A portion of a block of 128 unpatented mining claims extend into the southeast corner of the WSA, in areas mapped as having a potential for the occurrence of clay, gypsum, and limestone. According to BLM records dated December 1987, there were 46 active unpatented claims in the WSA, as summarized below.

Table 4 - Mining Claims

TYPE	NUMBER			ACRES		
MINING CLAIM	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Lode	N/A	29	29	N/A	580	580
Placer	N/A	17	17	N/A	680	680
Mill Site	N/A	0	0	N/A	0	0
Total	N/A	46	46	N/A	1,260	1,260

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Under low intensity multiple use management, which is the recommendation of this report, there will be no immediate impact. Over the long term, adverse impacts to wilderness values will occur in the southeast corner of the WSA as a result of mineral exploration and development.

2. Impact on Paleontological Resources: The fossil site will remain available for scientific research and excavation, subject to the provisions of the Coyote Mountains Fossil Site ACEC Management Plan. Casual collection of fossils is prohibited.

3. Impact on Energy/Mineral Exploration and Development: The ACEC is recommended for withdrawal from further mineral entry. The rest of the WSA will remain available for exploration and development.

4. Impact on Sensitive Plant and Animal Species: Only small-scale projects and management actions are expected under the proposed action. Because all of these relatively minor actions will be subject to thorough environmental analysis prior to project initiation, mitigation measures adequate to reduce impacts to insignificant levels can be developed.

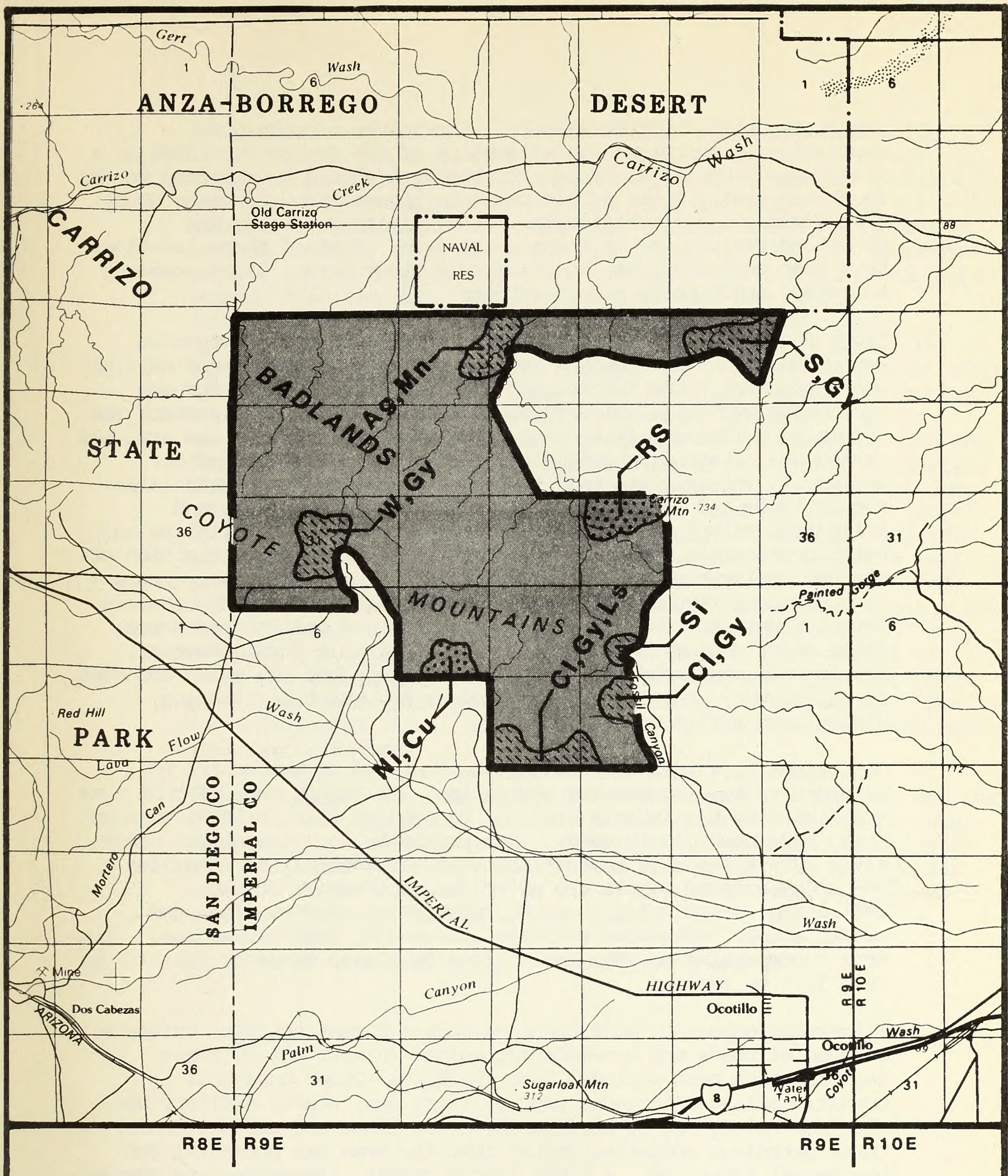
5. Impact on Petroglyph Site: The unusual petroglyph discovered in 1985 is incorporated into the ACEC, which is recommended for withdrawal from mineral entry.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the Final CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA - Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Known inaccuracies are noted in parentheses, as are explanations deemed useful to the reader.


Gert
Wash
ANZA-BORREGO
DESERT
264
Carrizo
Creek
Carrizo
Wash
Old Carrizo
Stage Station
CARRIZO
NAVAL
RES
88
BADLANDS
Ag,Mn
S,Gy
STATE
RS
W,Gy
COYOTE
Carrizo
Mtn 734
MOUNTAINS
Cl,Gy,Ls
Si
Cl,Gy
Painted Gorge
Fossil
Canyon
Ni,Cu
T15S
T16S
Red Hill
Wash
PARK
Flow
Lava
Can
Mortero
SAN DIEGO CO
IMPERIAL CO
IMPERIAL
HIGHWAY
Wash
Mine
Dos Cabezas
ARIZONA
Canyon
Palm
Sugarloaf Mtn
312
Ocotillo
Ocotillo
Wash
Water
Tank
Coyote
8
R9E
R10E
1
6
36
31
112
R8E
R9E
R9E
R10E

NONE	Recommended for Wilderness
▒	Recommended for Non Wilderness
▦	Land outside WSA Recommended for Wilderness
▥	Split Estate
▤	State
▨	Private

Explanation

▧	High Potenial for the Occurrence of Energy and/or Non-energy Minerals
░	Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals
M	Moderate Mineral Potential Location in a High Mineral Potential Area
H	High Mineral Potential Location in a Moderate Mineral Potential Area

Commodity Symbols

Ag	Silver
Cl	Clay
Cu	Copper
Gy	Gypsum
Ls	Limestone
Mn	Manganese
Ni	Nickel
RS	Rock & Stone
S	Sulphur
Si	Silica
W	Tungsten

0 1 2 3
MILES

N

Coyote Mountains

Minerai Resource Potential

MAP-2

CDCA-373

1. Inventory Phase: The relatively large volume of comments substantially supported classification of the Coyote Mountains as a wilderness study area. Some felt the area should be expanded to the south and east. Those public comments opposed to wilderness study area designation identified the roads, mining activity, and motorized vehicle use in the general area. Most of these locations have been excluded from the Wilderness Study Area. Other comments addressed study phase considerations.

2. Study Phase: Eighty-three responses were received. Forty-nine supported wilderness designation for the area; 34 preferred multiple use management. The two reasons given most often by wilderness proponents were: (1) wilderness in this location would protect the adjoining wilderness in Anza-Borrego State Park and (2) the area has varied and outstanding geological resources, a "wonderland of geology." The area was said to provide outstanding opportunities for solitude and primitive recreation. Fine educational and scientific values are present in the paleontological, wildlife and botanic resources. One respondent noted the need for protection of the peninsular bighorn, which may range through this area. There were numerous requests to expand the WSA into areas in the eastern Coyote Mountains, Carrizo Wash, Fossil Canyon, and Painted Gorge; field study showed these areas to be nonsuitable for wilderness. Respondents mentioned the desire to get away from the noise and dust of off-highway vehicles to obtain peace and quiet for camping, hiking, and a wilderness experience.

   Objections to wilderness designation centered on the desire to maintain vehicle access for recreation. (Although much of this area was closed by the Interim Critical Management Plan in 1975, adjacent roads have been widely used). The proximity to metropolitan areas makes this a favorite recreation area, particularly for families and older retired people who enjoy such activities as rock collecting, prospecting, camping, picnicking, sightseeing, and nature study. Motorized vehicles are usually used for access. (The area encompassing the WSA was officially closed to motor vehicle use from 1975 to 1980).

   Wilderness opponents said the area does not meet the 2(c) criteria, because of roads and man-made intrusions (almost all of these features have been excluded from the WSA). Other unnatural conditions listed included past military use, nearby military use, airplane noise, signs, structures, power lines and private lands. Three petroleum companies stated that the area has potential for geothermal resources. A miner listed copper, limestone, and gypsum as minerals present.

   Seven comments were received in response to the Public Input Workbook of 3-15-79. Three favored wilderness, mentioning the outstanding wilderness and ecological values and the contiguity to Anza-Borrego State Park. One respondent asked that the boundary be expanded to the south and east, since the impacts of man have not been significant enough to warrant exclusion of this area. The other respondents mentioned the closeness of the WSA to Orange County and other populated areas, the need for potential minerals, the excellent OHV opportunities here, and the lack of need for wilderness designation since the area's rough terrain will protect it from overuse. The County of Imperial stated that the southern portion of the area is one of the Valley's most valuable rock and gravel sites and that this resource is needed for repair or construction of airports, parking lots, bridges, and roads.

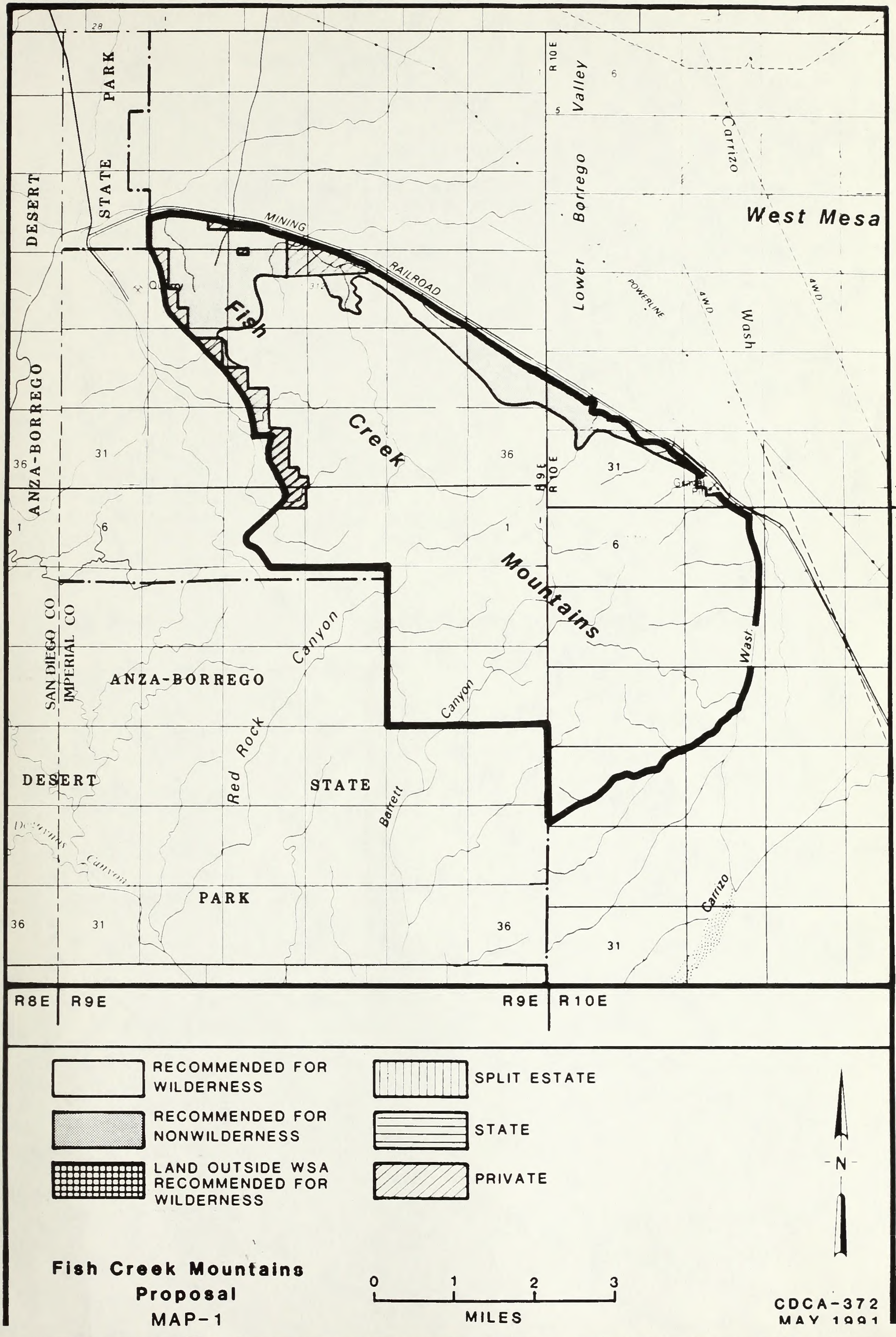
3. Draft Plan Alternatives: Most comments were general in nature, with few specific references to this WSA. The Sierra Club, the Audubon Society, and the Wilderness Society recommended wilderness designation for this area. This position was in agreement with the Protection Alternative. Many individuals wrote comments supporting this recommendation. In contrast, the National Outdoor Coalition (NOC), a coalition of mining, rockhounding, and off-highway vehicle groups, distributed its own alternative map. It showed a multiple use designation of moderate use for most of this WSA, with a small area of low intensity use in the northwest corner. The moderate intensity recommendation agreed with the Use Alternative while a low intensity recommendation agreed with the Balanced and No Action Alternatives. This position was supported by a large number of clubs and individuals through letters and coupons. One respondent preferred the No Action Alternative, stating that exploration for and development of oil, gas, and geothermal resources were the best uses for this area.

4. Proposed Plan: The recommendation of low intensity multiple use for this area was opposed by both wilderness opponents and proponents. Proponents wanted more wilderness within the CDCA and specifically mentioned this WSA. Opponents wanted this area to be managed for moderate intensity multiple use to allow use by vehicle oriented recreationists and miners.

   No comments were received from local governments.

☆U.S. GOVERNMENT PRINTING OFFICE: 1990-794-515/21913

BLM LIBRARY
RS 150A BLDG. 50
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, CO 80225


ANZA-BORREGO
DESERT
STATE
PARK
West Mesa
Lower Borrego Valley
Carrizo
Carrizo Wash
MINING RAILROAD
POWERLINE
4WD
4WD
Fish
Creek
Mountains
Wash
ANZA-BORREGO
DESERT
STATE
PARK
SAN DIEGO CO
IMPERIAL CO
Red Rock Canyon
Canyon
Barrett
Dos Cabezas Canyon
Carrizo
28
5
6
36
31
36
31
1
6
1
6
36
31
36
31
R 10 E
R 9 E
R 10 E
T 13
T 14
R8E
R9E
R9E
R10E
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE
STATE
PRIVATE
N
0
1
2
3
MILES

Fish Creek Mountains Proposal
MAP-1

CDCA-372
MAY 1991

SUPPLEMENTAL STATEMENT TO REFLECT POST-STUDY LAND PATENT

Fish Creek Mountains Wilderness Study Area (CDCA-372)

Page	Paragraph	Original	As Amended
1	1	17,626 acres public land 1,138 acres private land	17,519 acres public land 1,245 acres private land
2	RECOMMENDATION	15,466 acres recommended for wilderness	15,359 acres recommended for wilderness
2	3	15,466 acres	15,359 acres
3	6	BLANK	In January 1990, a minerals patent was issued to U. S. Gypsum for 152.51 acres. One hundred seven of these acres were within the area preliminarily recommended as suitable for wilderness designation. The 107 patented acres were deleted from the area recommended as suitable for wilderness designation.
4	MAP 1	HAS BEEN REPLACED	Attachment Map 1
5	TABLE 1	17,626 BLM 1,138 private 15,466 BLM 15,466 BLM recommended for wilderness	17,519 BLM 1,245 private 15,359 BLM 15,359 BLM recommended for wilderness
9	C., PARA 1	20 unpatented placer mining claims, 18	12 unpatented placer mining claims, 10
11	3	ADD	The validity exam for the mineral patent application of 4/16/87 for the eight placer mining claims was completed on 7/31/89. The application was for 162.735 acres. The north half of the Prickly Pear Claim was found to be nonmineral in character and was withdrawn. Patent #04-90-0011 (Serial Number CACA 20161) was issued on 1/9/90 for 152.51 acres. 107 of these acres were within the WSA.